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To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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NEW MARINE LEGISLATION.

The following new legislation, recommended by the steamboat inspectors, affecting the inspection service, has been enacted by Congress and put into operation during the fiscal year, namely: "An act to amend section 4440, Revised Statutes, authorizing the licensing of mates on river and second and third mates on ocean steamers who have charge of a watch," approved March 23, 1898, and "An act to create a board of local inspectors of steam vessels for the customs district of Alaska," approved April 21, 1898.

Senate bill 622, requiring the inspection of sail vessels over 700 tons, passed both Houses of Congress, but owing to amendments introduced in the House of Representatives, some of which were approved by the Senate, the bill remained in conference at the close of the session. The differences, however, will no doubt, as soon as Congress reassembles, be reconciled and the bill become a law.

The approximate number of sail vessels above 700 tons that will require inspection under the proposed law is about 650, divided up in the several supervising inspection districts as follows:

The fifth district, or so much as includes that portion of Lake Superior bounded by the states of Minnesota and Wisconsin, has 6 sail vessels that will require inspection.

The eight district, which include the waters of the Great Lakes north and west of Lake Erie, except that portion of Lake Superior which is bounded by the states of Minnesota and Wisconsin, will have 55 sail vessels to inspect, 28 hailing from Port Huron, 17 from Detroit, the remainder being divided among the ports of Chicago, Ill., Milwaukee, Wis., and Marquette, Mich.

The ninth district, which embraces the waters of the St. Lawrence river, Lakes Erie, Ontario and Champlain, will have 48 sail vessels over 700 tons to inspect, of which number 36 hail from Cleveland, Ohio, the remainder hailing from Buffalo, N. Y., Sandusky and Toledo, Ohio.

As the officers of these vessels (masters and mates) will require license under the law also, it is assumed that 650 masters and the same number of mates will have to be licensed.

THE NICARAGUA CANAL.

Of great value to the people of the United States generally, the Nicaragua canal is a matter of special importance to the Pacific and Southern States. The Pacific territories, with an area of nearly 800,000 square miles, dependent on the Pacific ocean for access to the outer world, "imperial in extent," as Blaine called them, are of greater extent than Germany, France, Italy and Spain combined. Their extraordinary growth need not here be dwelt on at length. Enough that, with only six per cent. of the population, they possess ten per cent. of the entire wealth of the Union, while the railway mileage exceeds that of any European country with the exception of France and Germany. The three maritime provinces, California, Oregon and Washington, are the richest, and they are the most exposed to attack containing 57 per cent. of the wealth of the Pacific States. The whole Pacific coast as yet, however, takes but an inadequate share—only 5.69 per cent.—of the total import and export trade of the United States.

The Southern States will also, by means of the Nicaragua canal, participate largely in the development of the Pacific and of the Far East. In the South are combined the advantages of all the other sections, without their greatest drawbacks and the remarkable progress achieved there in the past dozen years will undoubtedly be surpassed in the future.

THE NEW WHITE STAR LINER OCEANIC.

In the steadily increasing size of ocean-going steamships the Great Eastern has at last been surpassed in length, though not in tonnage. The Oceanic, now building by Harlan & Wolff for the White Star line, is 704 feet long, with a tonnage of 17,000, while her developed horse-power is expected to exceed 40,000; these figures for the Great Eastern being 682 length, 18,900 tonnage and 7,660 horse-power.

	Tonnage	Length in Feet	Breadth in Feet	Horse Power
Great Eastern	18,900	682	82	7,660
Britannic	5,000	455	46	5,500
Arizona	5,150	450	45	6,300
City of Rome	8,000	545	52	11,890
Alaska	6,400	500	50	10,500
Servia	8,500	515	52	10,300
Umbria	7,700	501	57	14,320
City of Paris	10,500	560	63	18,500
Teutonic	9,600	582	57½	18,000
Campania	12,950	620	65	30,000
Kaiser Wilhelm	14,000	649	66	30,000
Oceanic	17,000	704	.....	.....

The Oceanic is expected to be able to cross the Atlantic in four and a half day and to consume 700 tons of coal per day.

THE PRESIDENT'S NEW YACHT.

The president's new yacht, Sylph, is a handy little vessel, designed by Messrs. Gardner & Cox, naval architects, of New York City, and built at the Roach shipyard, Chester, Pa. Built of steel, the Sylph has an extreme length of 152 feet, 20 feet beam, and 8 feet 9 inches draught. She is schooner-rigged, and fitted with triple-expansion engines, which will give her a speed of 17 knots on trial. The dining saloon, which is forward on deck, is finished in mahogany, while below there are four large staterooms, decorated in white and gold, a large main saloon, bathroom, lavatories, and, at the extreme after end, a double stateroom for the captain and engineer. The crew's quarters are situated forward. The vessel has a coal capacity of 50 tons, and is fitted throughout with electric lights. The next thing we ought to do is to double our president's salary concurrently for the next five years so that he could fairly represent the greatest nation on earth. As it is now a railroad president gets more money annually than our honest chief executive.

YACHT RACING.

The dates on which the races for the America Cup are to be sailed between Sir T. Lipton's Shamrock and the vessel in course of construction for the New York Yacht Club Syndicate have been definitely fixed. The first will take place on October 3, 1899; and the 5th, 7th, 10th, and 12th have been set apart for the remainder of the "best of five," should it be found necessary to sail the full series. The races are to take place off Sandy Hook, and the arrangements and conditions are such as thoroughly satisfy both parties in the contest. It is reported that the steam yacht Nahma, one of the largest and most luxuriously furnished craft of her kind in the world has been purchased by Sir Thomas Lipton, the British challenger. He paid a visit to Greenock recently, and drove over to the Graving dock, where the Nahma was docked for survey. The Nahma is a beautifully modelled yacht of 1,739 tons, built at Clydebank last year for Mr. Robert Goelet, the New York millionaire. The purchase price is put down at £80,000, and it is stated that the Nahma will, in all probability, accompany the Shamrock across the Atlantic next autumn, Lipton and party finding their quarters on board during the races.

The latest news respecting our yacht is that Mr. Herreshoff has declared against building the new boat on the lines of the Defender. He claims that he can overcome the wild steering proclivities of the fin keels if he is permitted to build a yacht of his own design. He repeats that there is no danger of the New York Yacht Club losing the Cup, and we would add that such an alternative seems impossible.

WEATHER FOR NOVEMBER.

The following data, compiled from the records of observations for the month of November, taken at a Michigan station covering a period of ten years, show the average and the extreme conditions of the more important meteorological elements and the range within which such variations may be expected to keep during the corresponding month: Temperature—Mean or normal temperature, 30°; the warmest month was that of 1889, with an average of 33°; the coldest month was that of 1894, with an average of 28°; the highest temperature was 62°, on November 7th, 1893, and the lowest temperature was 7°, on November 19th, 1894. Average date on which first "killing" frost occurred in autumn, September 15th; average date on which last "killing" frost occurred in spring, May 20th. Precipitation (rain and melted snow)—Average for the month, 3.84 inches; average number of days with .01 of an inch or more, 19; the greatest monthly precipitation was 5.85 inches, in 1891; the least monthly precipitation was 1.51 inches, in 1895; the greatest amount of precipitation recorded in any 24 consecutive hours was 1.44 inches, on the 10th and 11th, 1891. The greatest amount of snowfall recorded in any 24 consecutive hours (record extending to winter of 1888-89 only) was 6.2 inches on November 15th, 1893. Clouds and weather—Average number of clear days, 1; partly cloudy days, 5; cloudy days, 24. Wind—The prevailing winds have been from the southeast. The highest velocity of the wind was 52 miles from the northwest, on Nov. 21, 1890.

VESSELS CLASSED.

Vessels classed and rated by the American Bureau of Shipping this week in the "Record of American and Foreign Shipping" are as follows: American tern, Alma, Otis; Barkentine, St. Lucia; ship, P. N. Blanchard and Brazilian ship, Franzoni.

SEVEN men were killed in the fireroom of the United States torpedo boat Davis during the official trial of that vessel on the Columbian River, Oregon, on October 20th. The disaster was caused by the explosion of the vessel's boiler tubes, of the Belleville or Thornycroft type, while steaming at the rate of 25 knots per hour.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

On Monday grain freights declined to 2½ cents on corn to Buffalo.

The barge D. L. Filer, which waterlogged in the gale last week and was towed into Racine, arrived here on Sunday in tow of the tug Welcome.

The schooner C. P. Minch, owned by C. W. Elphicke, went ashore at Pier Cove, Georgian Bay, last week, and is a total loss. She was lumber laden.

At the Independent Tug Line's floating dry dock the tug Monitor was in for a general overhauling; the tug Prodigy is in for repairs to stern bearing and rudder.

At Miller Brothers' shipyard the schooner Naiad was in for leak stopping; the tug Minnie B. for some new bottom plank and bottom calking; the steamer Kittie M. Forbes for a new wheel; the barge Delta is at the derrick and is to receive new spars, booms and gaffs.

The barge Wayne, which was laying in Joy & Morton's salt dock slip the night of the heavy gale last week, had a very rough experience, the undertow was so great that her lines parted several times and notwithstanding the efforts of her crew and the crew from the life-saving station she broke all of her lines and went adrift after nine hours' hard fighting with the wind and weather. She was then towed up the river for shelter by the tug Dickinson.

The new steel fire boat Illinois was successfully launched Saturday afternoon at the Chicago Ship Building Co.'s shipyard, at South Chicago, under the able supervision of General Manager W. I. Babcock. The ceremony of christening was gracefully performed by Miss Iona Owsely, niece of Mayor Harrison, in the presence of a large number of city officials and other spectators. The dimensions of the Illinois are 118 feet over all, 107 feet between perpendiculars; 24 feet beam, 12½ feet molded depth. She has a double high-pressure engine with cylinders 20 inches in diameter by 20 inches stroke, built by the Chicago Ship Building Co., and two boilers 12 feet in diameter by 12 feet long, built by John Mohr & Sons. The three sets of steam fire pumps are of the double-action vertical type with 17-inch steam cylinders and 10-inch water cylinders by a stroke of 11 inches, built by the American Fire Engine Co.

The Goodrich Transportation Co. will operate the whale-back excursion steamer Christopher Columbus, next season, as the day excursion steamer between Chicago and Milwaukee, while their steamer Virginia will leave Milwaukee every morning and Chicago at night. State rooms will be constructed on the hurricane deck of the latter boat and her sleeping capacity increased by other changes. A number of state rooms will be constructed in the Columbus and a large dining saloon will be built on top of the hull, opening on either side of the main turret and extending to the next turret. The World's Fair colors of the Columbus will give place to a sombre black. Upper deck state rooms will also be constructed on the company's steamers Indiana and City of Racine. All the west shore boats, except the Virginia and Columbus, will stop at Waukegan and Kenosha. This will make two down bound boats daily at these points and one up bound. The cruise of the steamer Georgia, which now ends at Manistiquie, will be extended to Mackinac Island. One of the steamers now trading to the east shore will be changed to the west shore in order to give increased service. The increased state room capacity to the three boats combined will make a larger number of rooms than any one of the boats has, and the operating expenses will be no greater than before. A large part of the work will be done in the company's own shops at Manitowoc, they having doubled the size of their machine shop and added a complete carpenter's shop with modern woodworking machinery.

The heavy gales last week caused sad havoc on Lake Michigan and the loss of the steamer L. R. Doty with all hands is much deplored. The Chicago tug company and life-saving crew were kept very busy and used their utmost efforts to save the vessels and the lives of their officers and crews. The following were lost or damaged on the lake: Steamer Horace A. Tuttle went ashore and became a total loss at Michigan City; steamer L. R. Doty foundered with all hands; schooner Barbarian ashore and became a total loss at Milwaukee; the schooner Isabella Sands had a very rough experience, when attempting to enter this port in tow of the tug T. T. Morford her line parted several times and she was blown by the gale down off 12th street where her anchors were let go and she rode out the storm. Her captain and crew were rescued by the life-saving crew and the tug Morford and brought in here. The schooner Cape Horn suffered severely and lost nearly all her sails and 30,000 feet of her deck load of lumber. She was brought in by the tug Prodigy after slipping both of her anchors off the Marine Hospital. The barge Aloha was brought in by the tugs Perfection and J. C. Evans. She was waterlogged and had her cabin badly damaged and about two-thirds of her deck load lost and was abandoned, the tug Perfection having taken off her crew the day before, the tug having to leave the barge as she had lost her tow line when she broke adrift from the steamer Kalkaska. The barge Delta dismasted and part of her deck load gone was brought in by the tug Dickinson. She had been picked up by the steamer J. W. Westcott just below Grosse Point. The steamer Oscar T. Flint, whose machinery became disabled, was brought in by the tug Prodigy. The barge Olive Jeanette, consort of the steamer

L. R. Doty, was brought in by the tugs Morford and Mosher, which had picked her up in midlake between Chicago and St. Joseph. Her steering gear was disabled and sails gone and her donkey engine and boiler damaged and she was leaking badly. She was taken to the Minnesota elevator and is having her cargo of corn taken out. The barge D. L. Filer, which became waterlogged in the gale and was towed into Racine, was brought here Sunday by the tug Welcome. The tug Prodigy when going down Lake Michigan searching for the Delta, Filer, Olive Jeanette and Doty found a quantity of wreckage and picked up a door, steering pole and other pieces of the wreck of a steamer which were brought here and identified as having belonged to the steamer L. R. Doty. The Prodigy has been down the lake since searching for the bodies of her officers and crew, but without success.

CLEVELAND.

Special Correspondence to The Marine Record.

Capt. George A. Minar, late of the steamship North West, has taken charge of the new steamer Clarence A. Black. The steamer left Lorain on Wednesday for Duluth on her maiden trip, carrying 5,000 tons of coal.

Mr. William Hawgood, owner, has offered a reward of \$25 for the recovery of any bodies which can be identified as belonging to the lost steamer L. R. Doty. Telegrams of such information can be sent to Keith & Co., Chicago.

As the steamer George Spencer, B. T. Pennington, managing owner, was entering lock No. 8, on the Welland canal last week, she bumped into one of the gates and carried it away. The rush of water carried away the two other gates, and navigation on the canal was temporarily suspended.

Mr. F. A. Kirby, superintendent of the Wyandotte yards of the Detroit Dry Dock Co., visited this port on Wednesday and called on a number of his marine friends. Mr. Kirby has been on an extended visit down east. Mr. Alex. McVittie and C. B. Calder, also of the Dry Dock Co., spent the day in Cleveland.

The Cleveland Steamship Co., which will operate the steamer to be built by the Globe Iron Works Co., the contract for which was closed last week, has been organized. Messrs. R. L. Ireland, Loftus Cuddy, Martin Mullen, A. C. Dustin, Capt. J. H. Bartow, Capt. John Mitchell, Capt. Alfred Mitchell, H. S. Hills and J. F. Wedow were elected directors. The directors will meet in a few days and elect officers.

The freight market is not as strong as it was at the close of last week. Grain rates are off at Chicago and the head of Lake Superior. No charters have been reported at Duluth at the cut rate, but some tonnage has been placed for wheat at three cents. Ore rates hold steady at \$1 from the head of Lake Superior, 90 cents from Marquette, and 80 cents from Escanaba. Coal rates are unchanged, but offerings of tonnage are more liberal.

The iron ore shipments from the Gogebic, Vermillion and Mesaba and other northern mines will practically close by November 15 for the season. The output and shipments for the season just closed will be considerably greater than those of last year. Prices were not sufficiently advanced, the mining men claim, to correspond with the increased demand for ore, but the indications are good for a still larger demand next year, and with continued good trade, improvement in prices is expected.

The ore receipts at Ashtabula for October were 319,214 tons, a loss of 11,937 tons as compared with the receipts for October last year. The ore receipts for the season to Nov. 1 are 2,548,275 tons, and to Nov. 1 last year receipts were 2,805,321 tons, showing a decrease this year of over 250,000 tons. The first three months started out with a large gain, but every month since has shown a decided slump. Coal shipments for October were 115,953 tons, or about 10,000 tons less than in October, 1897.

No sale of vessel property for a long time will attract more attention among marine men than the transfer, this week, of four wooden steamers of the Inter Ocean Transportation Co.'s fleet to J. C. Gilchrist. The boats were built in the palmy days of the iron ore trade, and were owned by the stockholders of the North Chicago rolling mills, subsequently merged into the Illinois Steel Co. The four steamers are given this year a valuation for insurance purposes of \$243,000. The four boats are, Manhattan, Massachusetts, Merrimac and Minnesota. Their aggregate net tonnage is 4,248, and their carrying capacity about 8,000 tons. For these boats Mr. Gilchrist pays \$70,000. They had been on the market all season and had been looked over by many vessel owners. Mr. Gilchrist has sent all his wooden schooners to the Atlantic and he is thus replacing them with the Inter Ocean boats.

ANOTHER total loss to be recorded with the disasters of last week is the schooner C. P. Minch, which went ashore at Pier Cove, Georgian Bay and is a total loss. The schooner was laden with lumber, and when she drifted on the rocks Captain Kaufman succeeded in getting a line ashore and on this the crew made their way to safety.

THE total amount spent for the improvement of rivers and harbors and incidental expenses for the year ended June 30, 1898, was \$17,161,799. The estimates for the year 1900, on the same account, are \$12,883,437 for continuous work, and \$15,500,341 for projects not covered by continuing contracts. Gen. Wilson asks that Congress authorize him to present special estimates for such works as are necessary to navigation.

MILWAUKEE.

To the Editor of the Marine Record

Capt. Chas. Carland and the life-saving crew at Milwaukee did heroic work in rescuing the captain and crew of the schooner Barbarian off this port in the heavy gale last week.

The schooner Barbarian, which went ashore south of the south pier in last week's gale, has become a total loss. She had on a load of 6,000 railroad ties when the storm struck her, about 1,500 were lost off the deck load, what remained have been taken off on scows, after the mizen mast and decks had been chopped away. The schooner was owned by B. F. Davison and Capt. Hanson, of Chicago, and was an old timer.

At the Milwaukee Dry Dock Co. the steamer E. M. Peck is in dock receiving repairs to damage caused by her going on the rocks at Topsail Island, St. Mary's river, comprising new forefoot, 15 feet new keel forward, 46 feet aft, straightening frames, considerable new bottom planking and calking. She is also receiving new strengthening plates 3½ by ½ an inch, her full length on both sides on top of old deck, also new rail. The barge Iron Cliff was in dock for three new frames amidships, extensive repairs to bottom and calking. The steamer Chas. A. Eddy was in for a new forefoot, extensive repairs to bottom forward and calking.

The Milwaukee Tug Boat Line's new tug boat, built by E. W. Heath, at Benton Harbor, Mich., is nearly completed and is to be launched in a few days. Her dimensions are 98 feet long, 22 feet beam, 12 feet hold. She has a triple-expansion engine with cylinders 14 by 22½ by 36 and 30 inches stroke, built by the Sheriffs Manufacturing Co., and a Scotch boiler, with the improvements patented by the late Conrad Starke, 10 by 12 feet, allowed 185 pounds steam pressure, built by the Manitowoc Steam Boiler Works, and a Sheriffs wheel 9 feet diameter. The new tug is of very fine model and is well and strongly built and fastened, and her machinery and boiler is of the very best. She has a very fine appearance on the stocks. Her owners may well feel proud of her as she is the finest tug ever launched at a Lake Michigan port.

DETROIT.

Special Correspondence to The Marine Record.

The steamer Republic, which went ashore at North Point, is in dry dock at Duluth. Twelve of her plates are damaged.

Capt David B. Cadotte, of the schooner Olive Jeanette, nearly foundered with the Doty on Lake Michigan, lives at 437 Beaufault avenue.

The steamer Westford and the consort Monitor have been purchased by C. D. Thompson, of Port Huron, from the Miner Lumber Co., of Alpena.

Capt Griffin of the lost steamer St. Peter, says she was insured for about \$2,000. His wife who was lost on the schooner, has \$500 in currency on her person.

The statement that Capt. Hilger, of this city, will pilot the yacht Duen is not true. Capt. Delaney, the present pilot, will continue with the boat to Chicago.

Charles Morton, keeper of the Holland, Mich., life-saving station, has been appointed superintendent of the eleventh life-saving district, which comprises all of Lake Michigan.

The steamer Gettysburg will not go to the ocean after all. She could not be lightered up to a 7-foot 4-inch mark and was brought back. It is said that her owners, Alger, Smith & Co., will not attempt to sell her.

The Chicago capitalists who are interested in the scheme to connect Lakes Superior and Michigan by a canal have had their articles of association prepared, and are making the publication required by law at Lansing, Mich.

The shock caused by the loss of nineteen lives by the sinking of the steamer L. R. Doty, of which J. C. Smith, of Bay City, was managing owner, has so affected Mr. Smith that he is now confined to his bed and is threatened with brain fever.

Joys Brothers & Co., have filed an intervening petition in United States court in the libel case against the steamer A. L. Hopkins, in which they wish to participate in the distribution of the proceeds of the sale to the extent of \$33.25 due them for supplies.

Gen. John M. Wilson says that the shoalest part of the channel through Detroit river before improvement was over Rocky Ledge, about 16 miles below Detroit, known as Limekiln Crossing, where the navigable depth of ordinary stages of water was 13 feet.

Vesselmen are requested to be on the lookout near Bar Point for the body of George Belanger, who was drowned off the schooner Nassau. He was 17 years old and dark. Anyone finding the body is requested to communicate with Capt. J. W. Westcott.

W. H. Jenks, of Port Huron, and the Manhattan Steamship Co., of New York, owners of the steamer Lloyd Porter, sunk by the Turret Age near Quebec Sunday, have commenced suit against the owners of the latter vessel. The Porter is valued at \$50,000.

Supervising Inspector General James A. Dumont, of Washington, D. C., and Supervising Inspector Westcott, of Detroit, have just completed an inspection of the eighth vessel inspection district, which includes all waterways west and north of Lake Erie, except a small portion of Lake Superior. The inspector-general says that he finds everything in good shape in the eighth district.

The keel for one of the big wooden schooners has been laid at the Davidson ship yard. The timber has been sawed and is ready for placing in position so that work on the frame can be commenced at once. The keel will be 325 feet long and will be laid at the central slip in the yard.

Capt. Miner, of Detroit, who commanded the Northern Steamship Co.'s steamer North West this season, is now sailing the new steel steamer Clarence A. Black. The other officers are Thomas Ellis, mate; J. O. Snyder, chief, and John W. Dietsch, second engineer, all of Detroit.

George Y. Wisner, of the Deep Waterway Commission, says that Capt. O. M. Carter, who has been convicted of embezzling millions in connection with the Savannah harbor improvements, is the victim of an outrage, and that he is perfectly convinced of the captain's innocence.

The citizens of Bay City have a plan on foot to assist the re-opening of the Wheeler shipyard. The plan is for the citizens to raise \$30,000 by subscriptions with which to enable Mr. Wheeler to purchase \$110,000 worth of bonds, which would give him control of the yards. A committee to solicit funds has been appointed.

The material for the new steel side-wheeler to be built for Erie parties at the Wyandotte yards of the Detroit Dry Dock Co., is now on the ground, and it is probable that the work of construction will begin some time next week. Eugene McFall, of this city, is interested in the new boat. She will be built somewhat on the plan of the steamer Frank E. Kirby, and will run between Erie and Buffalo.

Col. J. G. Lydecker says that this has been a record breaking year at the "Soo." The record of passages for the month of July was above 3,000,000 tons, which was the first time in the history of the lakes that the passage ever reached that mark in one month. In August and September the July record was duplicated, and there is no doubt that the October passages will equal those for any month of the year.

A Detroit vessel owner said this week that John Craig's reason for building at this time a steamer competent for both lake and ocean traffic and fitted to the dimensions of the St. Lawrence canals, is to be first in the field when those canals are approaching completion. It is possible that he will build one or two more besides to be ready by that time. He will then be in a position to dispose of them to newly organized lake and ocean transportation companies at a good price. They will in every way be capable of navigating salt water. They will be of deeper draught than the usual lake vessels of their length, and will have a few inches more beam. As ocean tramps are just as flat bottomed as those of the lakes, there will be no departure in that respect. In the matter of material, construction, engine and boiler model, etc., they will be exactly like the best ocean freighters. "It is Mr. Craig's opinion that the finishing of the canals, which is set by Ottawa officials at next fall, but which will not be inside of a year and a half or two years, will be a great relief to the strained condition of the lake fleet. There are scores of owners, even of boats 300 feet or more in length, anxious to take them from the lakes by putting them on some Atlantic coast route, or by chartering them to some ocean company. Of course the limit set by the canals will be about 245 feet, but this will enable a large number of craft practically useless on the lakes to get away."

FLOTSAM, JETSAM AND LAGAN.

The conclusion reached at the waterways convention held recently at Wheeling was that the Ohio river be dammed.

Vessels drawing fully 18 feet can pass safely through the Portage Lake waterways by keeping close to the ranges.

Capt. Michael Nolan, aged 60, who had been in the employ of Folger Bros., Kingston, for 30 years past is dead. He was a capable pilot.

The ore receipts at Conneaut for the month ending October 31 were 191,300 tons. It is said that about 100,000 tons of ore are still expected to arrive at that port this season.

Capt. John Griffin, owner and captain of the schooner St. Peter, that sank in Lake Ontario last Thursday, with all hands, is almost heartbroken over the loss of his wife, vessel, and crew of six men.

The schooner Penokee has reached Montreal safely. Capt. Somerville reports that he made the trip from Toledo in exactly seven days, which he claims beats all sailing records over the same course.

The steamer Helena arrived at Chicago with 3,000 tons of coal. Forty hours later she was in Lake Michigan with 102,000 bushels of wheat aboard. This surpasses all Chicago records for rapid handling of cargoes.

But little is left of the old schooner Barbarian, which went ashore near Milwaukee after being abandoned by her crew ten days ago. Her stern was the first to go, then her sides bulged out and fell away, and not much more than her keel remains intact.

The Montreal Transportation Company's schooner Kil-donan, which went ashore on Nicholson's Island a week ago, has been released, and is now on her way to Kingston. The Hector is still hard aground, and great difficulty will be experienced in releasing her.

Michigan City lumbermen have petitioned the hydrographic office to remove the wreck of H. A. Tuttle, which effectually blockades the harbor entrance. The channel is only 45 feet wide and soundings show only 11 feet 9 inches. Tugs have failed to remove the obstruction.

BUFFALO.

Special Correspondence to The Marine Record.

Capt. Chas. E. Brown, one of the best known vessel men on the lakes, died at this port on Sunday. Capt. Brown was born 65 years ago and spent most of his life on the lakes.

Shipments of coal for the month of October, by lake, was 334,640 tons, as against 409,313 tons for corresponding month last year. Grain receipts were 32,908,916 bushels, an increase over October, 1897, of 4,208,241 bushels.

Capt. A. Oldorf has been sworn in as master of the propeller Vega, thus returning to his old ship, of which he had command previous to the appointment of Capt. Wallace, who died recently as the Homeopathic Hospital at this port.

The new steel steamer Troy, of the Western Transit Company's line, finished unloading her second cargo. The Troy's cargo was not as heavy this trip as on her first visit. It consisted of 47,000 barrels of flour, nine cars of copper, nine carloads of shingles and fifteen carloads of canned salmon.

The Northern Steamship Co. is doing a tremendous lake and rail business through the port of Duluth. In addition to the three boats chartered for the rest of the season other boats are chartered for special trips. The Globe, Gratwick and Sevona are hired for the rest of the season and the Yale, Alva, Arthur Orr and Milwaukee have been chartered for special trips.

Six hundred and sixty-six canal clearances were issued during the month of October. The total shipments of principal freights was as follows: Lumber, 5,685,021 feet; wheat, 336,600; corn, 1,883,212; barley, 988,859; malt, 8,814; oats, 556,911 bushels; flaxseed, 30,605,744 pounds; iron and steel, 6,998,440 pounds; pig iron, 3,570,800; merchandise, 2,686,000 pounds. The full number of clearances issued since the opening of navigation has been 3,557.

Judge Coxe rendered his decision in the case of N. C. Allen as managing owner vs. Henry S. McFall, as general manager of the line to which the lost schooner Red, White and Blue belonged, on Tuesday. The court finds the plaintiff entitled to judgment. This action was to recover on a Lloyds policy for insurance on the schooner, which was wrecked on Whaleback Reef, in Green Bay, during September, 1895. The case was tried before the court at Buffalo in September, 1898, and the only question which remained unsettled was whether the action was commenced in time, as the policy contained a clause which provided that it shall be void "unless prosecuted within one year from date of loss." The action was commenced in July 1897, which the plaintiff claimed was within a year of the time of adjustment.

The body of Capt. Alexander Gillies, who went down with the Idaho, has been found. It had been under water 355 days. The Idaho sank off Long Point, Lake Erie, on November 5, 1897, and took nineteen men with her. The body of one of the Idaho's crew was found several weeks ago on the shore at a small Canadian town near Long Point. The body could not be identified, so it was buried by the people of the town in a cemetery there. The body of Capt. Gillies was washed ashore at Port Maitland, Ont., last week. The news was received by the relatives of the dead man in Buffalo, Monday night. Word had been sent to Mrs. Gillies that a body had drifted ashore at Port Maitland and that it was believed by some to have come from the Idaho. Mrs. Gillies went to Port Maitland and identified the body as that of her husband. She arranged to have the body brought to Buffalo for burial.

Some vessel agents and owners are predicting that we are not going to see any higher rates of freight this season. They point to the fact that the ore is practically all carried, except what is in the hands of companies that have boats enough of their own to meet all their wants. Every day ore carriers are giving up their season's jobs as completed and turning into the grain trade. The rates on lumber, especially from Lake Superior, are so high that lumber men are shutting down and will not pay them unless obliged to, for they say that they cannot expect to get their money back under present conditions of the trade. The coal rate is high enough to shut off shipments just as soon as the needs of the trade are met, and it is not expected that any more hard coal of account will go to Lake Superior yet this season. The package freight business is the only one that is so sure to hold out. There is such a great shortage in the amount of flour, Buffalo being about 1,500,000 barrels short of last season to date, that it will be impossible to catch up now if the mills send down every barrel that they can turn out till the close of navigation.

The grain elevators are gaining on the waiting cargoes and are now only about two days behind them. The New York Central and the Coatsworth, which latter is run in the interest of a Philadelphia grain firm, are the only ones that are behind and if vessel owners will firmly refuse to take cargoes for these houses there will be no detention. It is a hardship for vessels to wait even two days for an elevator. H. J. Pauly, of Milwaukee, owner of the Vail and consort Baltic, has determined to see if there is any redress for such losses and after his tow had lain here twenty-four hours he ordered the cargoes attached for demurrage and will make a big fight for his rights. If all owners would show the same amount of backbone there would be a different condition of things here. Capt. Wolvin, manager of the Zenith City fleet, has interested himself in the general matter of delays to grain cargoes and is sending letters from Duluth to his agents here, advocating a general conference of shippers and vessel owners next winter, which he thinks would lead to a clause in the bills of lading that would

entirely protect the vessel, or at least reduce the delays and divide the losses with the shipper. He says that other concessions that have been insisted on have been obtained. Another abuse is also brought up by Capt. Wolvin. He says that there is no need of dividing up the cargoes into so many lots and he declares on his knowledge as a vessel agent that it is a fact that the vessels are made to follow each other about from elevator to elevator in Duluth, and then do the same thing in Buffalo in order to get their cargoes out. Of course this is very expensive and in case two or three elevators are blocked it makes practically the entire fleet wait for them, when a straight cargo would either wait its regular turn at the single slow house or be unloaded at once at another. Capt. Wolvin calls attention to the fact that it used to be the custom for the elevator having the largest amount of a cargo to take it all, but this advantage has of late been given up by the vessel owner.

DETROIT MARINE POST OFFICE.

LETTERS REMAINING ADVERTISED IN DETROIT, MICH., POST OFFICE NOVEMBER 3, 1898.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Abernathy Thos., Str. Doty	Keely John
Ahlstrom Capt. Fred, 3, Sch.	Kennedy Jas., Str. D. C.
Hawgood	Whitney
Black Patrick	McLellan A., Str. Uganda
Beach Hiram	McClellan John F., Bge. Mc-
Bolhouse J., 3, Bge. Martha	Gregor
Barrie Chas., 2, Str. Doty	McNeil Walter
Carlson John, Sch. M. Rich-	McCabe T. J.
ards	Madden Capt. M., Str. L. S.
Conner Chas. H., Str. Cleve-	Porter
land	Maxwell Geo. L.
Chadwick Thos., Str. Chero-	Marks G. L., Sch. Helvetia
kee	Mason Jos., Sch. L. Law
Clark R. D.	Mast Geo., Sch. L. Law
Clark Capt. Thos., Sch.	Melochi Fred, Str. V. H.
Herschel	Ketcham
Connors R. J., Str. Gladstone	Moore Capt. Sam, Tug
Ellis Chas. S., 2, Str. Waldo	Traveler
Folkerts Willard	Miner Capt. C. A., Sch. Hel-
Finkle Hayes, Str. Corona	vetia
Goss Laurence, Str. Doty	Post Sam, Sch. Amboy
Gaul Edward, Str. Empire	Philip Capt. S. E., 2, Sch.
City	Verona
Griffin Capt. John, Sch. St.	Reynolds J. E., Str. S. D.
Peter	Marshall
Grant Robert	Rattray Gordon, Str. Moran
Grus August	Reynolds Ralph
Hutchinson Mrs. Heldon,	Sharp Harry, 3, Str. Doty
Bge. S. L. Watson	Scott W. S.
Hall Fred	Shank Chas.
Harrington Thos.	Sambier Martin, Str. Ewen
Hunter William	Sloane Jas.
Hoskin Will	Sipes Wm.
Huffman Clifford, Str. Bavaria	Sischo Joe
Hollywood Chas.	Scott Miss May, Bge. Clinton
June P. J.	Tart Eddie, 4, Str. Marquette
Jennings Harry, Str. R. Ful-	Vasbinder A. D.
ton	Wood Eugene
Johnston Albert, Str. T.	Watson C. W.
Davidson	Warner Louie
Jones A. M.	

REPORTED BY THE LOOKOUT.

The lumber rate from Duluth to Lakes Erie and Michigan a year ago was \$1.87½ or 62½ cents less than now. The best rates paid last season at any time was \$2.12 and that was for a boat to load Thanksgiving day when it was necessary to break ice in the slip. The going rate now from Duluth is \$2.50 per M. feet.

Captain Day of the Pittsburg & Conneaut Dock Company received orders Wednesday from headquarters to be prepared to handle over 2,000,000 tons of ore next season at Conneaut, which is double the amount handled there this year. Every foot of new dockage under construction on the east side at Conneaut harbor will be utilized.

A Lansing dispatch of October 27th says that the project for a canal to connect Lakes Superior and Michigan seems to be a go. The Chicago promoters have issued the following notice: "Notice is hereby given that the books for subscription for stock of 'The Lake Michigan and Lake Superior Ship Canal & Dock Co.' will be open November 3, 1898, at 58 State Street, Chicago. Estimated cost of canal, \$10,000,000."

A large gantry crane was installed some time ago at the plant of the American Steel Barge Co., West Superior, Wis. The crane traverses the full length of a runway, consisting of an elevated steel track extending the full length of the shipyard between two building berths. The object of the service is the transference of material from the shops at the end of the yard out to the vessels under construction, this being accomplished by means of the crane with very little labor. The crane is 170 feet in length, from out to out of arms, 55 feet high from top of rail to the under side of crane, and has a lifting capacity of 15 tons half way out on arms, and 5 tons at the extreme end of arms.

RECORD OF WRECKS AND CASUALTIES FROM SEPTEMBER 16 TO OCTOBER 15, 1898.

(Reported by Norman B. Conger, Local Forecast Official and Marine Agent, Weather Bureau.)

During the above period 32 vessels were damaged or became total losses through stress of weather, fog, or smoke. Heavy smoke, mixed at times, with fog, prevailed over Lakes Superior, Michigan, and Northern Lake Huron. The greatest number of casualties was reported September 18. Seven lives were lost during the period. The following maximum wind velocities (in miles per hour) occurred at the various lake stations: September 24, Toledo, 60 west; Cleveland, 48 northwest; October 2, Duluth, 34 southwest; 6th, Cleveland, 32 north; 11th, Buffalo, 42 southwest; Cleveland, 42 south; Toledo, 38 southwest; Green Bay, 26 west; 12th, Buffalo, 42 west; Cleveland, 38 west; Saugeen, 26 northwest; 13th, Alpena, 30 east; Green Bay, 36 north; 14th Alpena, 32 east; 15th, Cleveland, 44 west. Details follow:

September 18. Steamer Colorado stranded at Eagle Harbor during heavy northwest gale and smoky weather, and became a total loss; crew rescued; loss on vessel, \$25,000; cargo of flour, \$40,000; total, \$65,000.

Steamer E. C. Pope stranded at Vermillion Point during heavy northwest gale and smoky weather; estimated damage to vessel, \$2,500; released.

Steamer Kalkaska, with schooners Aloha, J. H. Mead, and Mediator, in tow, was damaged through heavy weather off Portage canal; the J. H. Mead and Mediator stranded, and the Mediator became a total loss. Crews rescued; estimated damage to Kalkaska, \$1,500; estimated damage to J. H. Mead, \$3,000; cargo, \$1,250; estimated loss on Mediator, \$2,000; cargo, \$2,500; the Mead was released and the Mediator reported total loss.

Steamer Keystone stranded on Big Summer Island during heavy northwest gale and burned to water's edge, becoming a total loss; crew rescued; estimated loss on vessel, \$17,000; cargo of coal, \$3,000; the weather was very smoky.

Schooner Senator stranded at Skilagalee Reef during heavy northwest gale and smoky weather; crew rescued; released; estimated damage to vessel, \$2,000; the tug Salver capsized and stranded while endeavoring to release the schooner; released.

Steamer Lewiston stranded on Scott's Point, during heavy northwest gale and smoky weather; released with nominal damages.

Schooner Keepsake foundered off Ashtabula in heavy seas and became a total loss; crew rescued by steamer City of Erie; estimated loss on vessel, \$2,500; cargo of coal, \$1,000; total, \$3,500.

Canal boat Brocton, in tow of the steam canal Massasauga, went ashore during heavy weather at Dunkirk; the steamer grounded on the rocks in endeavoring to release the Brocton; both released.

September 19. Schooner Southwest stranded on Huron Island during heavy southwest gale and smoky weather and became a total loss; crew rescued; estimated loss on vessel, \$4,500; no cargo.

Schooner John T. Mott sprung a leak in the heavy seas off Buffalo and was towed inside the breakwater and pumped out; damages nominal.

Steamer J. H. Jones (Canada), during dense smoke off Kagwong, Manitoulin Island, collided with the steamer Pacific and sunk in about eight minutes; crew rescued by the Pacific; damages not given.

Steamer Queen of the Lakes, while lying in harbor for shelter at South Manitou Island, caught fire and burned to water's edge; crew rescued.

September 22. Steamer Minneapolis stranded on Point Pelee during dense fog; released; estimated damage to vessel, \$15,000.

Steamer George N. Orr, with barge Carrington in tow, stranded at Iroquois Point during dense fog and smoke; released after lightering ore from the Carrington.

Steamer Orinoco stranded on Waverly Shoals during heavy fog; released.

September 25. Schooner Emma L. Coyne became water-logged during heavy weather and stranded near Middle Island; a portion of the deck load was lost; released; estimated damage, \$500.

The lighter Monitor, just after leaving the barge Carrington, with cargo of ore, foundered in heavy sea and carried down five of her crew. The vessel lies in the fairway near Point Iroquois.

September 26. Steamer Chas. A. Eddy stranded on Biddles Point, Mackinac Island, during dense fog; released; estimated damage, \$5,000.

Steamer Neoshoto stranded at Limekiln Crossing during dense fog; released; estimated damage, \$1,000.

September 29. Steamer Toledo, lumber laden, water-logged and sank in 24 feet of water at the entrance of Portage canal during a heavy gale; crew rescued; estimated loss on vessel, \$10,000; cargo, \$10,000; total, \$20,000; reported total loss.

Steamer Wyoming stranded on Peshtigo Reef, Green Bay, during dense smoke; released; estimated damage, \$500.

Schooner Active stranded south of Ford river, Lake Michigan, during heavy gale; crew rescued; estimated loss on vessel, \$4,000; cargo, \$1,000; total, \$5,000; reported total loss.

October 3. Schooner S. J. Luff became water-logged during heavy weather off Cana Island and lost deck load of lumber; estimated damage to vessel, \$1,000; cargo, \$1,500; total, \$2,500.

October 4. Tug Anderson in leaving Duluth harbor in face of heavy gale broke her steering gear, and was towed into harbor; estimated damage, \$200.

October 9. Schooner A. J. Rogers stranded on Old Mission Point during heavy gale, afterward floated off, sank in 50 feet of water, and became a total loss; crew rescued; estimated loss on vessel, \$3,500; cargo of pig iron, \$15,000; total, \$18,500.

October 10. Barge Exile, in tow of steamer A. A. Turner, was dismantled during heavy southeast gale near Death's Door; estimated damage, \$1,000.

Steamer Peerless broke connecting rod to engine during heavy weather about 35 miles off Marquette, and was towed into harbor by steamer Shuck; damages nominal.

Steamer Majestic (Can.) stranded on east end of Drummonds Island during dense fog; released with nominal damages.

October 13. Schooner L. B. Shepard capsized during heavy gale off Two River Point and became a total loss; crew rescued; estimated loss on vessel, \$2,500; cargo, \$2,000; total, \$4,500.

October 14. Schooner Churchill in tow of steamer Majestic foundered in heavy gale off Waukegan and became a total loss. Two of the crew went down with the vessel; the others were rescued by the Majestic; estimated loss on vessel, \$35,000; cargo of ore, \$3,500; total, \$38,500. The steamer Majestic was damaged by the heavy weather to the extent of \$300.

A MODERN COAST SURVEY VESSEL.

A large, completely equipped, modern government survey boat, the Pathfinder, will be launched at the Crescent shipyards, Elizabeth, N. J., early in December. It is the first vessel, fitted out with all modern appliances, built for the coast survey in recent years, and it is especially designed for service in Alaskan and Aleutian waters. She has a length over all of 196 feet, is of 1,000 tons capacity, and has a steam radius of 7,000 miles. Its stock of instruments and scientific apparatus generally will be the most complete ever carried in a survey vessel, and its capacity will permit the carriage of sufficient stores to last throughout the season's service in the north. The vessel will be in readiness for the government by March and will start next June on the long cruise to Alaska. Supt. Pritchell, of the survey, returned today from a trip which included an inspection of the work in progress on the vessel.

TURBINE PROPULSION ON WARSHIPS.

According to the annual report on shipbuilding and navigation just received from the United States, recent experiments with turbines have convinced the Navigation Department that, at all events, in the near future the steam engines of war vessels cannot be displaced by turbines. The chief of the department asserts that the extra speed attained by the Turbinia was due as much to her remarkable boiler as to her turbine, and that experiments made in America do not augur well for the immediate adoption of the new form of propulsion. The report speaks of the absolute necessity of high speed in the war vessels of the future, and advocates a large increase in the personnel of the Navy. Mention is made of the remarkable voyage of the battleship Oregon from San Francisco to Cuban waters without a hitch of any kind, and states that the Oregon was undoubtedly successful in preventing the escape of two of the Spanish ships from Santiago.—Liverpool Journal of Commerce.

THE aggregate length of the coast of the United States, exclusive of Alaska, is 5,715 miles, and more than 700 towns and villages on this extensive line can be attacked by ships drawing 10 feet or more of water.

SOME ASTRONOMICAL NOTES FOR NOVEMBER.

No especially interesting astronomical phenomena have been witnessed during the past month.

One group of sun spots with three well defined umbra included in a common penumbra, extending in its longest dimension about fifty thousand miles, came into view, by rotation, the last week of the month and is now on the last half of its visible journey without much change in outline. A small single spot was also observed following at no great distance. The observation of sun spots is always interesting, for one never knows in advance what he will see.

The most experienced astronomer cannot predict with any degree of certainty what appearance the sun's face will present a single day in advance. So an element of uncertainty is always present in each observation of the sun, hence there is no monotony about it.

No first magnitude stars now visible in the evening will disappear during the month though Arcturus will then be low in the northwest and only visible for a short time in the early evening. This number will be increased toward the close of the month by the appearance, late in the evening, of Betelgeuse and Rigel, of the brilliant Orion. Arcturus is now visible in the northwest and Vega and Altair will continue to beautify the western evening sky. Fomalhaut may be found just west of the meridian towards the south, and Capella will attain its meridian splendor during the month. The Pleiades and Hyades with Aldebaran are now prominent objects in our eastern evening sky.

The square of Pegasus with Andromeda and the great Nebula are now nearly overhead in the evening. The full moon in November will have no especially attractive features as the harvest moon and hunters' moon have had, but it will be a no less welcome visitor in our evening sky toward the close of the month.

Venus and Saturn may still be seen for a short time in the evening near the horizon toward the southwest. They are no longer satisfactory objects for telescopic observation, and during most of November they will be lost to sight by reason of their apparent proximity to the sun.

Jupiter is now a conspicuous object in the eastern sky during the early morning hours. He is the only moving planet. Mercury will be visible for a few evenings the latter part of the month, but the shy planet will only be seen by those who search for him.

Mars, the red planet, may now be seen in the eastern evening sky, and for many months he will be the only evening planet, not counting the brief visits of Mercury. The darkness is increasing and the hours of daylight decreasing at both ends of the day. The change will be more noticeable in the morning because the sun that has been so much in advance of the true time will gradually slacken his pace, and hence will be later in rising, though at the close of the month he will still come to the meridian more than ten minutes in advance of true time. Thus it may be seen that "Old Sol" is a very unreliable timekeeper.

Wonder if any one has noticed how rapidly his shadow at noonday is growing D. SATTERTHWAITE, Toledo, O.

BOYER PATENT BOILER.

The subjoined letter from Mr. John S. Loomis, owner of the steam yacht Marguerite to Messrs. L. Boyer's Sons, is a deservedly high testimonial to the efficiency of the Boyer Patent Boiler and endorses all that is claimed for it in the matter of economy in the production of steam, rapid steaming, carrying steam steadily and other important features.

BROOKLYN, N. Y., Oct. 12, 1898.
Messrs. L. BOYER'S SONS, New York.

Gentlemen:—In reply to your inquiry as to the working of the Boyer Patent Boiler that I put in the steam yacht Marguerite last May, I desire to say that I have used it nearly continuously since that time and have run over five thousand miles in the sound and east as far as Cape Cod. I do not hesitate to say that it is the best and most rapid steamer I have ever known. The difference in weight, compared with my last boiler, decreases the draught four inches and the boiler being set much lower makes the yacht much steadier in a seaway.

It produces steam much more economically than my former boiler. It has increased the speed a good two miles per hour. It carries water steadily and is very easily fired. I have found it very reliable in a "brush," carrying steam steadily. I believe from my experience with it that the construction is perfect and extremely durable. It has most certainly proved to be all that was represented and really it has so many good points in addition to those I have stated, that any language at my command fails to do it justice, for the reason that I cannot express myself strongly enough in its praise.

I am pleased to have the opportunity to say what I have in its favor.

Yours very truly,
(Signed) JOHN S. LOOMIS.

MARITIME LAW.

EWAN V. TREDEGAR CO.

(District Court, E. D., Virginia.)

DEMURRAGE—DELAY IN DISCHARGING.—If the ship is prevented, after getting into her dock, from securing a fit place for discharging by any cause over which she has no control, then any delay occasioned by the crowded condition of the dock is chargeable to the consignee. But, when a place for unloading is furnished by the consignee within the 24 hours allowed after receiving notice of arrival, delay occurring, not by any insufficiency of carts to receive the cargo, but by reason of the vessel delivering from but one hatch, while she might have used two, is chargeable to her, and she can recover no demurrage therefor.

This was a libel by J. B. Ewan, master of the schooner Sarah Schubert, against the Tredegar Company, to recover demurrage for delay in discharging a cargo of coal at Richmond, Va.

Hughes, District Judge. It appears from the evidence in this case that the schooner arrived at Richmond on the night of the 15th of November, 1881, and went across to the Richmond & Danville R. R., Wharves. Her engagement was to notify the consignee of her arrival, but there is no proof that the notice was received by the respondent, until the forenoon of the 17th. The allegation in the libel that notice of arrival was given by telephone on the 16th is not proved. The schooner was bound by contract to be, not merely in the

I do not think the schooner is entitled to recover demurrage in this case, and the libel must be dismissed, with costs.

THE JAMES MARTIN.

(District Court, E. D., Virginia, February 10, 1883.)

SHIPPING—ABANDONMENT OF VESSEL BY CREW—EVIDENCE.—Where the master and crew have abandoned their vessel under circumstances raising a grave suspicion that they dismantled and scuttled her, but, on a libel by the cargo owners and their insurers, the master and claimants assert that the injury was caused by collision, the failure of the latter to examine several members of their crew, who were disinterested, or to libel the vessel with which they pretend to have collided (the collision being denied), or examine any members of her crew in regard to the alleged collision, is prejudicial to their case.

SAME—FREIGHT—ABANDONMENT.—When a vessel and cargo are abandoned at sea by the master and crew, without intention to retake them, the shipowner can maintain no claim to the freight.

SAME—BAD SEAMANSHIP.—When a master and crew abandoned their vessel, claiming that she was sinking, but she was afterwards found riding safely and not leaking seriously, and the circumstances were such as to raise a grave suspicion that she had been purposely dismantled, and an attempt made to scuttle her, held that, because of bad seamanship and negligence the ship was liable for the amounts paid for salvage, and as damages to the cargo, by the insurers.

TREASURY DECISIONS.

TONNAGE TAX ON YACHTS.

It is the law of the United States that yachts belonging to regularly organized yacht clubs of any foreign nation which shall extend the like privilege to the yachts of the United States shall have the privilege of entering or leaving any port in the United States without entering or clearing at the custom house or pay tonnage tax.

It appears that a short time ago an act was passed in England by which American pleasure yachts will become subject in the ports of Great Britain to a charge of one shilling per ton as light dues. The Secretary of the Treasury has notified all American collectors of customs that as Great Britain has declined to extend to American yachts in British ports the privileges now extended to British yachts in American ports that on and after April 1, 1899, to require British yachts visiting United States ports to enter and clear at the custom house and to pay a tonnage tax as imposed by law on merchant vessels.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, in their weekly freight report to the RECORD state that, the threatening aspect of the political horizon has caused very heavy



View Showing Widening of Cuyahoga River.

harbor of Richmond, but at the usual place of unloading there. In the present instance she was bound to be in the dock at Richmond; that being the usual place of unloading. 1 Pars. Shipp. & Adm. 313 note 1, and Abb. Shipp. Eng. (Ed. 1881) p. 243, note o, and page 244, notes a—c. If she was prevented, after getting into the dock, from securing a fit place for discharging her cargo, by any cause over which she had no control, then the lay days occasioned by the crowded condition of the dock would have been chargeable to the consignee. The consignee, not the ship, is answerable for delay from the crowded condition of the harbor. But there does not seem to have been any delay in this case from this cause. The schooner came into the dock about 3 p. m. on the 17th, and the unloading began the next morning at 8 a. m.,—that is to say, within 24 hours after arrival and notice to consignee; for, supposing that notice was given on the morning of the 17th, the consignee was not bound to commence unloading within the 24 hours recognized by the contract. The unloading seems to have been delayed a day and a fraction of a day beyond the period provided for in the contract. The weight of evidence is mostly in favor of the proposition that this delay was not caused by an insufficiency of carts provided by the consignee to receive the coal, but was caused by the coal being delivered from one only of the two hatches of the schooner, and not from both hatches. This was the fault of the schooner, and not of the consignee.

GLORY OF THE NAVY.

From Secretary Long's Boston Speech.

The glory of the navy, and the glory of the war which it shares with the army, is not, however, in battle alone; or, rather, it is not in the brutal elements of battle. It is rather in the fine instinct, the heroic courage, the splendid devotion, the intense patriotism which nerve men to endure what otherwise were the unpardonable horrors of armed conflict, for the sake of the great ends and causes for which battles are fought.

If I may say one word more concerning the navy, I agree with the evident proposition that with the recent extension of our territory the new duties that are upon us, and the now enlarged importance of our sea power, the increase in our naval force should go on. But I am not one of those who would have it extravagantly expanded, and I would prefer a reasonable increase commensurate with the increased need. Too rapid a development will surely lead to a reaction in the popular mind and a tendency to the other extreme, as happened after the war for the Union.

A SPECIAL dispatch sent out from Bath, Me., this week, states that the New England Shipping Co., Kelley, Spear & Co., and William Rogers have just taken contracts for the construction of fifty wooden barges at an average cost of \$30,000. It is estimated that these contracts will keep the yards busy for two years.

pension of enquiry for our grain. Owing to the very limited offering of tonnage on the part of owners, on the other hand, freights have not declined but hold their own, although the practical withdrawal of tonnage from our market has ceased since the last day or two. Cotton freights, both from the Gulf and the Atlantic ports, appear to have reached top; although the enquiry from the latter ports for November boats continues, it is less keen, and charters appear inclined to hold for the recognition of their slightly reduced terms in reply to owners' demands. The pressing enquiry for prompt time boats has been satisfied, and charterers are now holding back in the expectation of securing tonnage on a lower basis ere long. The demand for steam tonnage for the purpose of transporting other than the staples mentioned is very light and transactions limited accordingly.

Our market for sail tonnage continues lifeless, so that we cannot report fluctuations in rates towards either a lower or higher range of freights. The only interesting feature in our list of fixtures is the charter for refined petroleum in barrels to Antwerp, the first one of its kind since a number of years. The enquiry for case oil to the Far East is still limited, and rates continue based on our last quotations, but there is some prospect of a revival in this line in the near future.



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Entered at Cleveland Postoffice as second-class mail matter.

CLEVELAND, O., NOVEMBER 3, 1898.

IN the first trial of the collision case between the steamers Conemaugh and New York wherein Judge Swan, of Detroit, so seriously arraigned the master of the New York, even going so far as to state that his license ought to be suspended or revoked, thereby throwing a certain onus on the shoulders of local inspectors of steamboats, it was well that the local inspectors of steam vessels did not rely too much on the court's judgment. Very frequently the local inspectors are too slow, ignorant and remiss in their duties, but in this case they apparently took several years to consider their verdict with the result that they were right in not taking a man's bread and butter away. On the other hand, if they had listened to Judge Swan's version the only alternative was to cancel his license. We would have thought better if Judge Swan had been less severe in his judgment and rendered a more technical and judicious judgment in marine cases than has lately appeared, but, and however, the judgment of the court goes to a certain extent. Yet they, or he, may not descend to vituperation, and it is in this connection that the RECORD calls the court down.

It appears that the Illinois Steel Works, South Chicago, Ill., has fallen behind in their production for material as ordered by the British shipyards and consequently the Lloyd's surveyor, detailed to inspect their steel for shipbuilding purposes, has been ordered back home. Either their orders are not as prolific as formerly or they don't produce the metal; we rather incline to the former view. The inspection at Carnegie's is, however, still continued, and is likely to be for some time to come, as the steel is turning out above the general average, guaranteed on the other side. Carnegie is, of course, a good deal of a pedagogue and hitting for American applause. He talks about shipbuilding yards when those we have are in some instances idle; still, it is bound to come our way sooner or later, not on account of Carnegie, who is an important production and hollering to bring more dollars into his coffers so as to support his Scotch estates, but rather from our geographical environment. Carnegie is not a shipbuilder in spite of all his talk through various class journals, it is a question if he is even a philanthropist, but it is certain that he is a shrewd Scottish metal worker and would draw from this country every dollar he can in his monopolistic deal in working up iron and steel. He now seems to be the hare which the hounds are after, yet, after looking into the matter seriously, it is possible that the game is not worth the candle or, at least, not just yet, although Carnegie's figures would seem to show such was the case. The advice we would offer our people is not to be carried away with Carnegie's showing. We will, as a matter of history, control the world's oversea transportation at a later date, but it does not need to be forced by such shallow means as Carnegie's interviews through the public press, or rather class journals.

THE SKY IN NOVEMBER.

Astronomical data for November, 1898, furnished to the MARINE RECORD by the Washburn, Wis., observatory:

Mercury is an evening star but is not favorably situated for visibility. Venus is still seen in the early evening as the brilliant star low in the southwest. By the end of the month the planet will disappear in proximity to the sun. Mars rises to the north of east from 10 to 8:60 p. m. and crosses the meridian from 5:30 to 4:05 a. m. Jupiter rises to the south of east from 4:15 to 3:50 a. m. Saturn is very low in the southwest, in the early evening, and sets from 6:35 to 4:55 p. m.

The times of sunrise and sunset for the month at Milwaukee are as follows:

	SUNRISE.	SUNSET.
Nov. 1	6:27	4:43
Nov. 11	6:39	4:31
Nov. 21	6:52	4:23
Nov. 31	7:03	4:18

The times of the moon's phases are:

Nov. 6, third quarter	8:28	A. M.
Nov. 13, new moon	6:20	P. M.
Nov. 20, first quarter	11:05	A. M.
Nov. 27, full moon	10:39	P. M.

The principal fixed stars visible during the month are, in the evening hours: To the west, Vega and Altair; near the meridian, the bright stars of the constellation, Cassiopeia and Andromeda; to the east, Aldebaran, the Pleiades, and Capella.

The present month is notable because of the expected return of two different meteoric showers, the Leonids and the Andromedes.

The passage of the former stream of meteors across the earth's orbit occupies several years, and our present entrance within their limits is within one year of the expected time of their most brilliant display. Numbers of these meteors will be seen probably during the nights of November 13 and 14, but their greatest frequency should be in the early morning of the 14th and the following evening. The absence of the moon will be favorable for observation. The radiant, or point from which the meteors appear to start, is situated within the bow of the Sickle in the constellation Leo. This point will rise at about 10:40 p. m. and reach the meridian at 6:20 a. m. south of the zenith about one third of the distance to the horizon. These Leonid meteors are characterized by their swiftness and absence of trains.

The Andromedes, so called because they radiate from a point in the constellation Andromeda, are the stream of meteors supposed to be the fragments of the lost Biela's comet. They should be seen most frequently on the morning and evening of November 23, but the brightness of the moon, between first quarter and full, will be an unfavorable circumstance for observation. The radiant point, which is near the bright star Gamma Andromedae, will pass through the zenith at 9:30 p. m. and be visible practically through the entire night. These meteors are characterized by their slow motion and luminous trains.

BUFFALO HARBOR IMPROVEMENTS.

The Buffalo Express gives an interesting account of the improvements in Buffalo harbor in progress under the direction of Maj. T. W. Symons, C. E., U. S. A. The Express says: "It may not be generally known, but it is a fact, that had it not been for the Major's skill in overcoming obstacles, the present great improvement to the harbor would have been delayed indefinitely." Rubble stone at \$1.20 a cubic yard, was recommended for the entire corps of the rubble-mound section of the breakwater, Maj. Symons substituted gravel at 30 cents, thus saving \$600,000, and securing the passage of the bill authorizing the improvement. "The Major submitted new plans entirely including a simpler arrangement of the sections into which the work necessarily had to be broken and these were adopted in their entirety; so that the responsibility as well as the glory of the achievement seems to be the Major's." Employed in the work is a dredge which has a daily capacity of 5,000 cubic yards of soft excavation and can be used at a depth of 120 feet, lifting 15 cubic yards each time. A trench 60 feet wide at the bottom and 90 feet at the top is to be excavated in the mud at the bottom of the lake to the depth of 30 feet and into this is to be dumped gravel to the level of the lake bottom, broken stone going on the top of this to furnish a foundation for the crib work of the breakwater which will be 12,000 feet long when finished, 5,000 feet being of gravel and stone, and the remainder of timber crib. Maj. Symons designed, especially for this work, a water telescope, by the aid of which the bottom of the lake is plainly visible to him or his engineers

from the deck of a scow. Its displacement is such that it floats at a depth of eight or nine feet. Guided by the complete information which is thus furnished by the government engineers, the dredgers and others employed in the submarine work have no difficulty in following the course laid out and the plan of construction. When the work is completed, there will be a line of breakwater, broken only by two openings, 20,000 feet, or about $3\frac{3}{4}$ miles long, sheltering the finest and busiest harbor on earth.

NOTICE TO MARINERS.

Notice is given by the United States engineer office at Sault Ste. Marie that four boulder shoals, each having an approximate area of 50 by 150 feet, and located between Gros cap and Iroquois point, east end of Lake Superior, have been found by U. S. Assistant Engineer B. Rohnert. They lie eastward of the alignment of the private lights known as Bernard's range, at distances of 750 to 2,000 feet from the alignment.

The shoalest spot on the most westerly shoal is marked by a buoy painted in red and black horizontal bands, moored in $17\frac{1}{2}$ feet water. Mariners are advised to pass to the westward of the buoy.

In June last the steamer City of Berlin was reported as having grounded at a point about three miles nearer the Sault. At the time of grounding she was drawing 17 feet water and was on the river St. Mary upper range nearly opposite the Mission, about $1\frac{1}{3}$ miles above the red can buoy on Mission shoal. The obstruction, which has 15 feet water on it, was, at the time, marked by the United States engineer with a floating staff carrying a red flag.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN, ILLINOIS AND WISCONSIN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., November 1, 1898.

LAKE MICHIGAN, GREEN BAY, ETC., BUOYAGE.—Notice is hereby given that the work of changing the iron buoys in the Ninth Light-House District, for the winter, to spar buoys, similarly painted will begin on the dates below:

Gas-lighted buoys, entrance to Fox river, Green Bay, Wisconsin, November 7.

Gas-lighted, bell and iron buoys in Green Bay channels between Lake Michigan and Green Bay on Wiggins Point Shoal, and in Sturgeon Bay, Wisconsin and Michigan November 8.

Gas-lighted buoys Fox Island and Rush Shoal buoys, Lake Michigan, Michigan, November 12.

Mackinac Straits (west of Old Mackinac Light Station), and channels north and east of Beaver Island Group, Michigan, November 15.

Off Sheboygan, Wisconsin, November 18.

Off Milwaukee and Racine, Wisconsin, November 21.

Off Chicago, Illinois, November 28.

GREEN BAY AND FOX RIVER.—Notice is hereby given that, on or about November 15, 1898, the following named lights will be established in the southerly end of Green Bay, at the entrance to and in the mouth of the Fox river:

Tail Point Pile Cluster Beacon Light.—A fixed white lantern light, 15 feet above mean lake level, on top of a small white lamp house surmounting a cluster of three piles in about 10 feet of water, on the westerly side of the channel, and about 4,800 feet ($\frac{1}{10}$ mile) S. by E. $\frac{1}{4}$ E. from Tail Point Light House.

The light will illuminate the entire horizon.

Elbow Beacon Light.—A fixed red lens-lantern light, about 12 feet above mean lake level, shown from the projecting window on the channel side of a small white lamp house surmounting a cluster of six piles in about 9 feet of water, on the easterly side of the dredged channel, at the elbow about midway between Grassy Island and the mouth of the Fox river.

The light will illuminate 180° of the horizon to the westward of S. by W. $\frac{3}{4}$ W., and N. by E. $\frac{3}{4}$ E.

Murphy's Dock Beacon Light.—A fixed red lantern light, about 18 feet above mean lake level, on a white post on the northerly end of Murphy's Dock, easterly side of the mouth of Fox river.

Bearings are true; miles are statute miles.

By order of the Light-House Board.

FRANCIS J. HIGGINSON,
Commodore, U. S. Navy, Chairman.

DOMINION OF CANADA.—ONTARIO.

LIGHT-HOUSE REMOVED FROM HUGH ROCK TO CARLING ROCK.—As indicated in part VI. of Notice to Mariners No. 54 of 1898, the light-house previously maintained on Hugh rock, in the entrance to Parry Sound, Georgian Bay, Ontario, has been removed to the north portion of the highest part of Carling rock.

Lat. N. $45^\circ 20' 8''$
Long. W. $80^\circ 14' 27''$

No change has been made in the light-house, which is a square wooden building, with sloping sides, surmounted by a square wooden lantern, painted white with a red stripe on the west side. It is 27 feet in height from its base to the vane on the lantern.

The light is, as previously, a fixed white light. It is elevated 26 feet above the level of the water, and should be visible 7 miles in the channel. The illuminating apparatus is dioptric of the seventh order.

After passing Spruce Island Shoal gas buoy, vessels entering the sound should shape their course to leave Carling rock light-house at least 600 feet on the starboard hand.

There is rock with 16 feet of water on it 425 feet N. 40° E. from the light-house, which is or will be marked by a spar buoy.

ROCKS IN PARRY SOUND CHANNEL.—Mariners are warned of the existence of the following rocks in Parry Sound channel, which are marked on Admiralty chart No. 1731, corrected to June, 1898, but which are not shown on the earlier editions of that chart:—

1. A shoal, with 18 feet of water on it, situated 600 feet N. 11° W. from the northernmost rock awash of Borer bank.

2. A rock, with 14 feet of water on it, situated 800 feet N. 60° E. from McClelland rock beacon. This rock narrows the channel between it and Spruce Island Shoal gas buoy to 650 feet.

3. A spit, with 17 feet of water on it, running out about 600 feet E. from the rock awash south of Spruce Island, or 1,600 feet N. 67° E. from Spruce Island Shoal gas buoy.

4. A shoal, with 16 feet of water on it, 425 feet N. 40° E. from Carling rock light-house.

Some of these shoals have already been marked by spar buoys. Those not so marked will be buoyed on the opening of navigation next spring.

Variation in 1898, 6° W.

ADDITIONAL BUOYS IN DETROIT RIVER.—The government of Canada, on the 3d inst., established seven black spar buoys on the west side of the dredged channel off Bar point, at the mouth of Detroit river, Lake Erie, Ontario.

The axis of the channel in question lies in the straight line joining Bois Blanc Island (Canadian) light-house and Detroit river (U.S.A.) light-house. This channel has been dredged by the U. S. government to a width of 800 feet, with a depth of 21 feet.

No particulars of the positions of the black spar buoys have yet been received, but they are approximately opposite the red buoys. Three of them have been moved in from where they marked the west edge of the old shallower and wider channel, and four of them are new buoys.

BUOYS IN SOUTH BAY ENTRANCE.—Four buoys have been placed for the government of Canada by Mr. W. J. Stewart, in charge of the hydrographic survey of Lake Huron, at the entrance to South bay or Manitoulin gulf, Manitoulin island, Lake Huron, Ontario, as follows:

1. A red spar buoy in 25 feet water, S. 23° W., 6,000 feet from the outer range light, and S. 80° W., 600 feet from a spot with 15 feet water on it. It is also 850 E.S.E. of the line of range. On the west and south sides the buoys may be passed close to, but vessels passing to the north-eastward should give it a berth of at least 1,000 feet.

2. A black spar buoy, to mark the end of Scotchie shoal, in 18 feet water, close to a spot with only four feet on it. The buoy is situated S. 40° W., 2,350 feet from the outer range light, and 400 feet W.N.W. of the line of range. It may be passed at a distance of 100 feet on its east side.

3. A red spar buoy S. 15° W., 750 feet from the same light, 135 feet E.S.E. of the line of range. The buoy is in 14 feet water, 200 feet west from a 9-foot rock. As a spit with 17 feet water on it extends 150 feet farther to the southwestward a master should take care to be exactly in the line of range whilst passing here.

4. A black spar buoy, in 18 feet water S. 55° E., 400 feet from the same light, marks the south end of the shoal water from the village point.

Vessels entering the harbor on the line of range should, as soon as the inner red buoy is abeam, haul sharply to N. 70° E. to pass between the red and black buoys (rather nearer the latter), and afterwards keep in mid-channel.

Vessels cannot tie up at the wharf, but will find excellent anchorage in from 6 to 9 fathoms at any place from a quarter of a mile above the wharf.

DANGEROUS WRECK IN RIVER ST. MARY.—The United States hydrographer gives notice that the lighter Monitor, laden with iron ore, foundered on September 25th, 1898, just above Pointe aux Pins, to the eastward of the red gas buoy (Middle Ground No. 68) and close to. She lies directly in the channel, with the top of her cabin awash and the derrick upright and out of the water. She is an obstruction to navigation and no arrangements have been made for her removal.

For the present a white lantern light will be displayed from the derrick head to mark the wreck.

TEMPORARY RANGE LIGHT AT PORT DALHOUSIE.—A light-house tower is in course of construction at Port Dalhousie, Lake Ontario end of the Welland canal, to replace the back range light-house destroyed by lightning in August last. The new tower stands on the shore line immediately east of the line of the breakwater, 1,500 feet inside the front range light, in the same alignment as the old range.

Pending the completion of the new tower, a fixed red light will be shown from the frame work of the new building, at an elevation of 50 feet above the level of the lake. The permanent light in the new tower will be a revolving or occulting white light, but will not be put in operation before the opening of navigation next spring.

WRECK ON THE BAY OF QUINTE.—The barge Puritan has sunk in about 20 feet of water in the main channel of the Bay of Quinte, about one quarter of a mile S. by W. ½ W. from Deseronto light. Her mast shows above water and a light is shown from it at night. A spar buoy is also being moored to draw attention to the position of the wreck.

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

Department of Marine and Fisheries,

Ottawa, Canada, 22nd October, 1898.

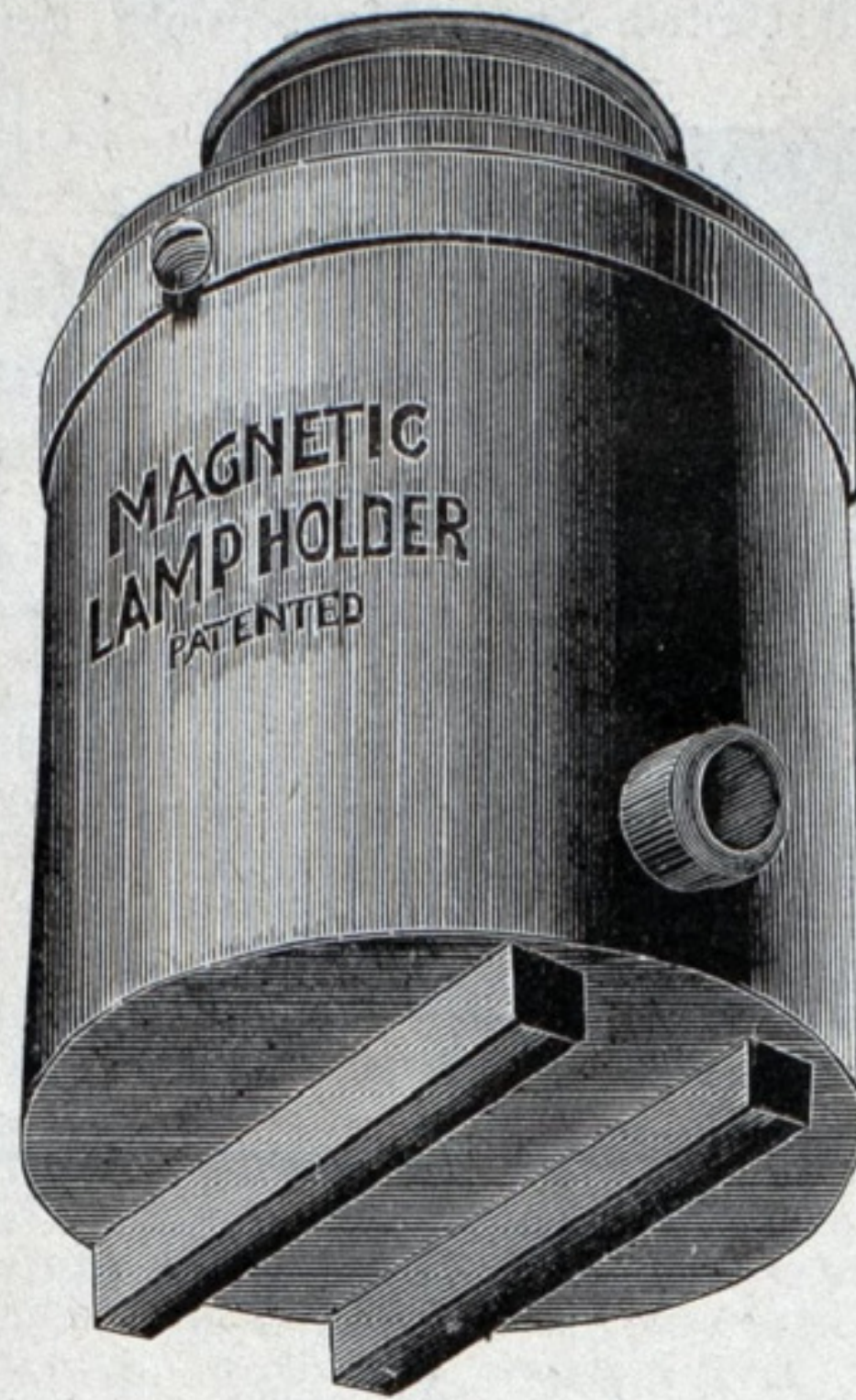
All bearings, unless otherwise noted, are magnetic and are given from seaward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

Pilots, masters, or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notices of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada.

MAGNETIC LAMP HOLDER.

(Illustrated).

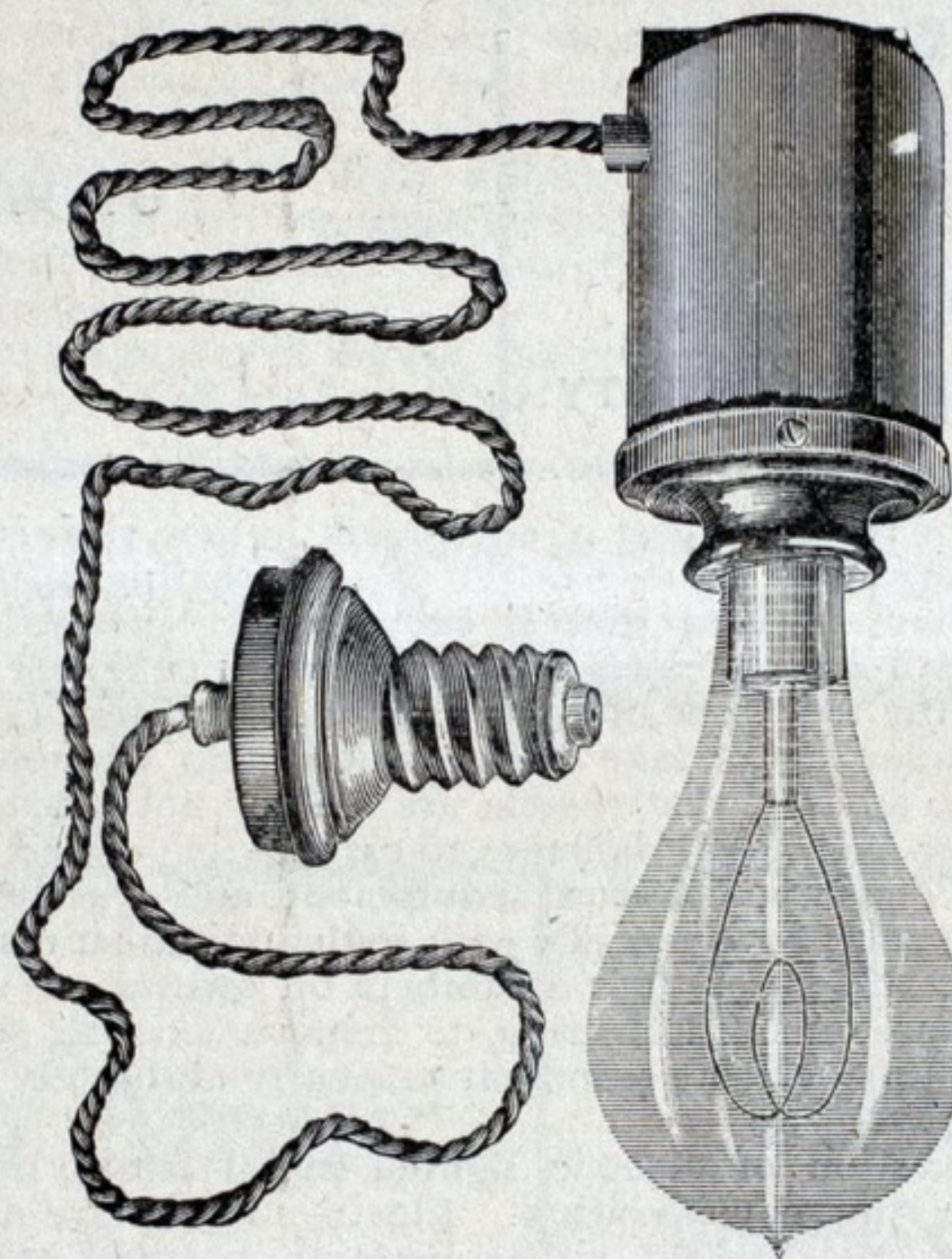
A very ingenious method for use in moving and attaching to any desirable point an incandescent lamp is now being placed on the market by the firm of Jenkins Bros., 71 John



CUT NO. 1.

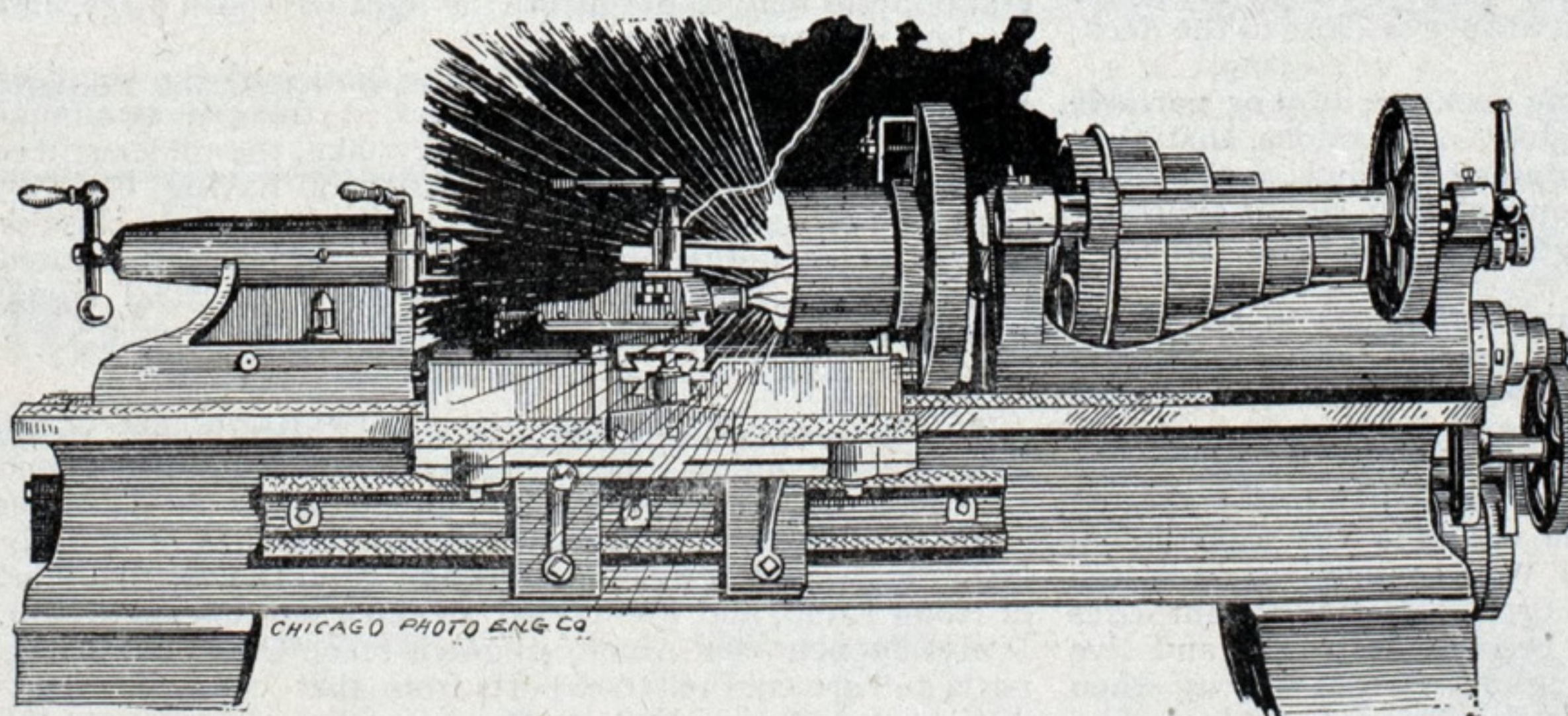
Street, New York, and 31-33 North Canal Street, Chicago, also at their several other salesrooms.

In the illustrations, Cut No. 1 shows the holder, and being a magnet they will adhere to any piece of iron or steel in



CUT NO. 2.

any position. They are thus designed for use in machine shops as they can be so placed as to have the light shine exactly where it is wanted when working with lathe, planer,



CUT NO. 3.

drill or other tools. It is particularly useful in boiler shops, as its use does away with torches and it can be easily carried inside the boiler. There are scores of other places and positions where this device would prove of the greatest assistance and many places in the engine and boiler rooms of steamers where the portable magnetic holder would permit of the use of the incandescent light, thus eliminating

the danger from using candles or torches, as with the incandescent light it is impossible to set fire to anything. Cut No. 2 shows the holder attached and as made for Edison, Westinghouse or Thompson-Houston lamps. The cost of the holders is very trifling, while the facility and convenience which it gives is only limited by the requirements for a safe, portable light. Cut No. 3 is an illustration of the portable magnetic lamp holder attached to a lathe, and has been so arranged as to give our readers a fairly good idea of the adaptability of the holder for working in any desired position. Full directions are furnished by the manufacturers, but the holder is so simple that anyone who can even screw off or on a common bulb will find no difficulty in using the Magnetic Lamp Holder.

NOTES.

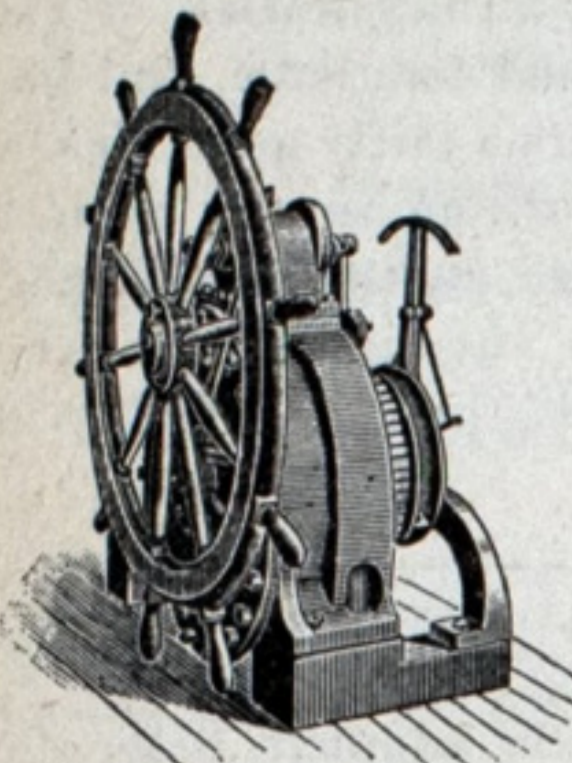
THE Italian government has finally adopted Belleville boilers. It is announced that the French generators will gradually replace other types of boilers in all old vessels of the Italian fleet. The cruiser Puglia, recently launched at Tarentum, which is fitted with horizontal triple-expansion engines, will have furnaces under her boilers so arranged that oil fuel may be used.

THE United States Supervising Inspector General of Steamboats in his annual report to the Secretary of the Treasury says: The following comparative statement, showing the increase in the use of steam navigation from the year of 1807 when steam was first made commercially successful by Robert Fulton on the steamer Clermont, running from New York to Albany on the Hudson river, will no doubt prove interesting, not only to those directly interested in steam navigation, but to the general public as well. Two epochs are taken for the purpose of comparison, namely, from 1807 to 1857, and from the latter date to the end of the fiscal year 1897. The first of these epochs, or five decades, shows an average increase in number of inspected steam vessels of but 20.22 such vessels, while the latter epoch, or four decades, shows an annual increase in the number of inspected steam vessels of 202.07 such vessels. The year of 1857 is taken for the termination of the first epoch for the reason that in that year appears for the first time in the records of the Treasury Department an apparently complete report of steamers inspected during the year, and officers licensed during the same period. During the year 1857 there were 1,122 steamers inspected and 4,162 officers licensed. During the year 1897 there were 8,083 steamers inspected and 40,452 officers licensed. The loss of life during the year 1857 was 310, or one person to each 3.6 vessels inspected. The loss of life in 1897 was 183, or one person to each 43.83 vessels inspected.

THE Kenney Company, 72 and 74 Trinity Place, New York City, report that the government inspectors after a thorough investigation have decided to equip the transport Massachusetts now being over-hauled at the John N. Robinson Co.'s shipyard, Erie basin, with the Kenney Flushometer system. Sixty-nine Kenney flushometers were recently installed on the transport Mohawk and their selection for the Massachusetts is a flattering endorsement of the claims of the manufacturers. The flushometer is an ingenious appliance for flushing water-closets and does away entirely with the noisy and otherwise objectionable overhead flush tank. It marks a distinct advance in sanitary engineering and marine plumbing.

IN France and Russia the assistance which the singing of some swinging song is to men on the march is recognized to a far greater extent than with us. In the French navy there is an inspector of singing, who spends his life in going from port to port teaching the men how to sing Dibbinlike ditties of his own composition. The experiment has proved so much of a success that this Frenchman will now take the naval cadets at Brest in hand and teach them how to use their voices. In a few years' time, consequently, every officer and sailor in the French navy will be able to sing, and when they go into action, ashore or afloat, they will keep their courage up by going over the old patriotic and other songs taught them in times of peace.—Ex.

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Generates no heat in pilot house.
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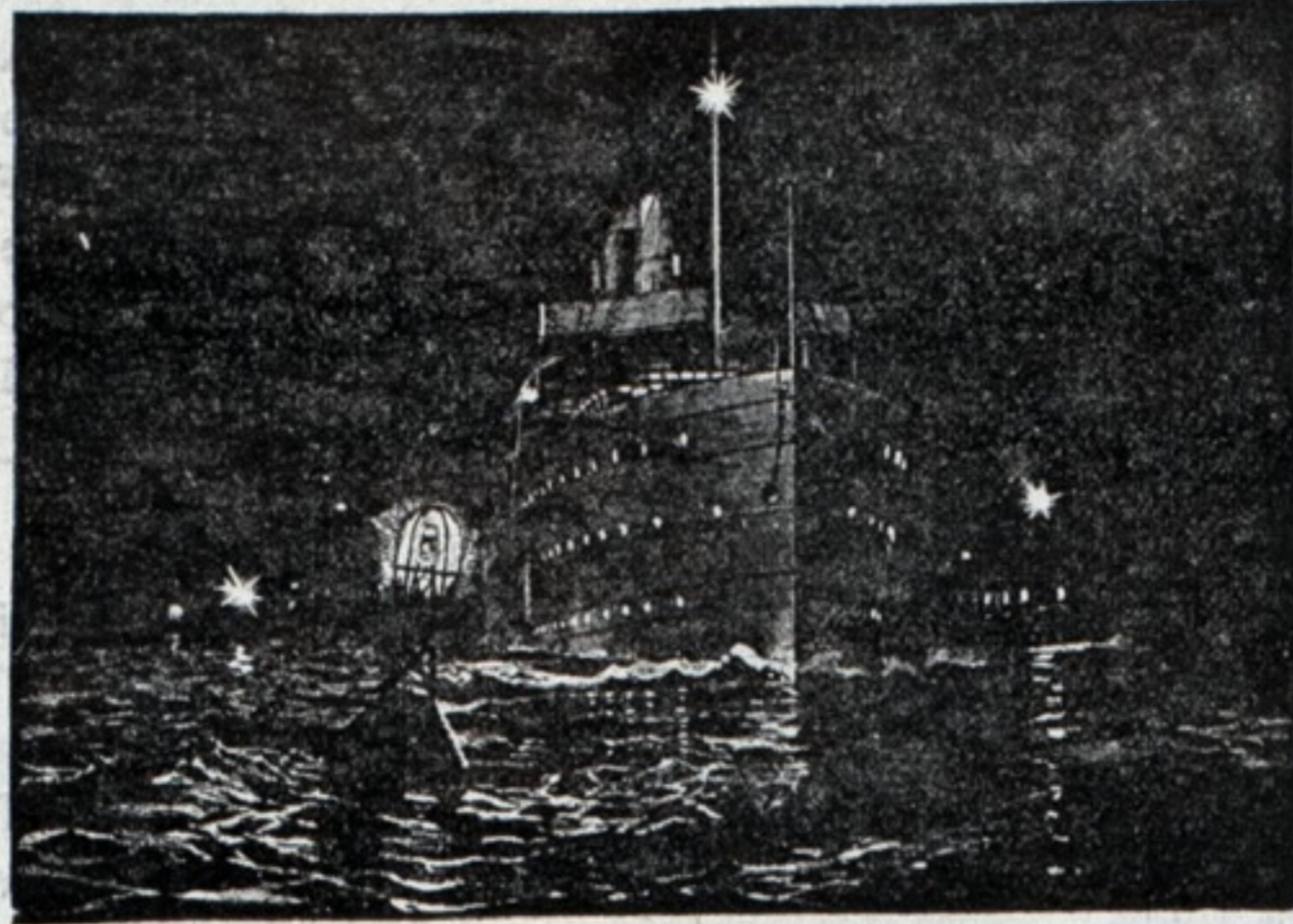
Send for References.

Queen City Engineering Co.

BUFFALO, N. Y.

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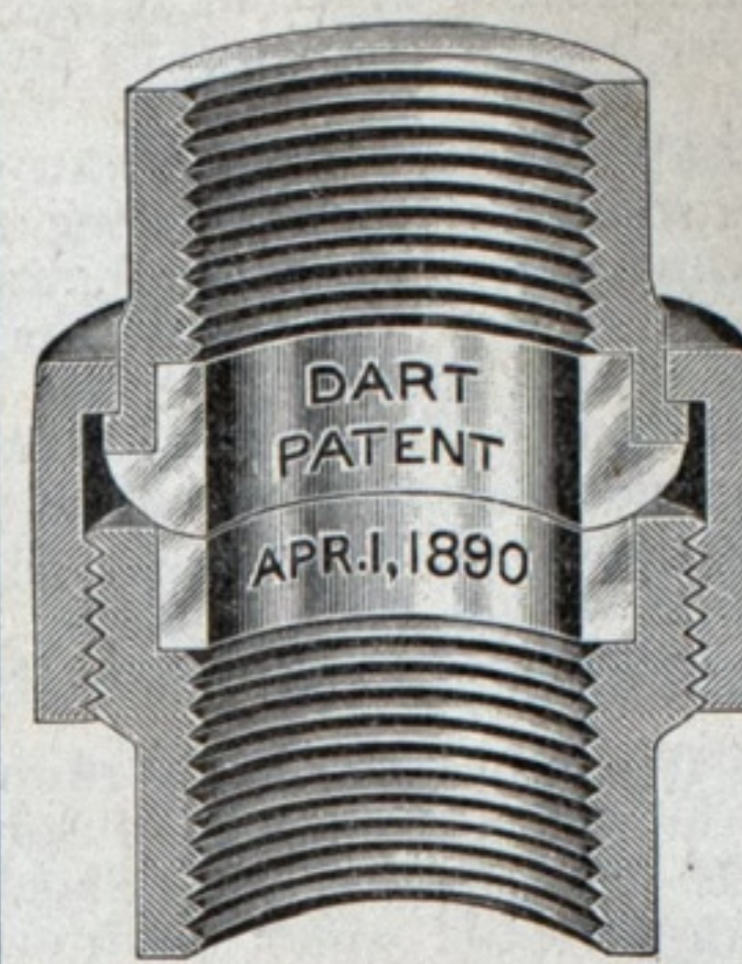
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from 80 to 365 days and nights without attention, and can be seen a distance of six miles.

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ELECTRIC LIGHTING ON LAKE VESSELS.

The following has been sent out by the Inland Lloyd's management, A. B. Drake, Chief Inspector:

Serious defects in electrical lighting of freight spaces in vessels have been brought to the notice of lake underwriters, through losses caused by fires (on account of such defects), in grain cargoes on different steamers, in the past few years.

That fires from such cause have occurred, and damage resulted, has been undeniably proven in the case of the SS. Selwyn Eddy, causing a loss of \$10,000 on cargo of oats; and on the SS. German a loss of over \$5,000 on cargo of corn, the latter occurring this present season.

It has been demonstrated, by actual test, that an incandescent lamp encased in a vapor or extra globe, and immersed in grain, will ignite the grain; therefore there is no absolute safety except the lamps on vessels are located in such position that the cargo cannot come in contact with them.

To get the desired benefit of the lights it may be impossible to do this, but the risk may be minimized. If the lamps are placed close to the spar deck, enclosed in vapor globes and protected from mechanical injury by strong steel guards, only in exceptional cases will the cargo interfere with them. If the oblong vapor globe be used the lamps should be placed horizontal, but always as close to the deck, between the beams, as possible.

If the vessel has more than one deck use drop or portable lights, for lower holes, using "plug" connections, that they may be easily detached and removed, when not in use. These portable lights should connect with circuit expressly for them, running to switch board in engine room. No fixed lights or wires in lower holes.

A vessel with bulkheads running from floor to spar deck, each freight compartment should have its own circuit, running to switch board in engine room, the engineers to have entire charge of them.

Investigation of steamers equipped with electric plants will show more or less of them with switch boards located so close to bulkheads, there is no access to the rear of them except by removing the board. Wire connections on switch boards so placed, must be more or less slack, different wires may be in contact, insulation become destroyed, and live wires with burning lamps throughout freight spaces, when the wires were supposed to be dead. There should be free access to rear of switch boards, and the "knife" pattern switches used.

Also many "cut-outs" or fuse boxes in an unsafe condition. They may be covered with a sheet of mica, the mica be broken, perhaps entirely gone. The fuse may "blow out" at any time. If jute, oakum, or other highly inflammable material is close to these cut-outs when a "blow-out" occurs, it will ignite. Cut-outs should, invariably, be enclosed in non-combustible cabinets or boxes.

To conform to above suggestions, the cost of necessary changes on vessels, already equipped, will not be heavy, and

will not increase the cost of equipment in new vessels. The lake underwriters approve of the plan of locating lights, etc., as suggested, satisfied that it promises the greatest safety from risk of fire. Vessels so equipped will be given proper credit in the 1899 issue of Inland Lloyd's Register.

The underwriters take the position, and eminent legal counsel so advises, that vessels are liable, notwithstanding the Harter Act, for all damages to cargoes or vessels resulting from defective electrical equipment, and whether such losses are paid, rests entirely with each individual insurance company. Therefore it is incumbent on owners of vessels, as a measure of self-protection, to remove existing defects, and have the electric equipment as nearly absolutely safe as possible.

The question of electric lighted signal lamps has also been receiving consideration. Electric lights are liable to go out at any moment, either by lamp burning out, fuse, "blow-out," or stoppage of dynamo from any cause. In the event of a signal light so doing, (particularly in close or narrow water, i. e., the straits, rivers, entering or leaving port,) there instantly arises a condition of danger, with possible damage, or loss, to life as well as property. If dependance is placed upon lighting an oil lamp, ready trimmed and in either the signal lantern, or place it where you may, several minutes may elapse before the light will be in place, and too late to avert disaster.

This matter will be brought to the notice of the board of United States Supervising Inspectors, at their next annual meeting. Whatever action they may take, the underwriters call owners' attention to the necessity of having, between the hours of sunset and sunrise, while navigating close or narrow water, lighted oil lamps in globes of properly colored glass, and convenient to hand, for use if electrical signal lamps should be extinguished.

THE trade of the United States with China is not easily ascertainable, unless it be in respect of direct shipments from American to Chinese ports. Shipments to the United States from the Flowery or Celestial Kingdom, are frequently trans-shipped on British bottoms and from the British port of Hong Kong, and are tabled as exports to Great Britain. It also happens that American goods reach China via British ports and are credited to exports from that country. It is estimated, however, that about seventy-five per cent. of the Chinese trade is in the hands of the two countries, giving them a like interest in the commercial destiny of the Celestials. It is estimated that the actual trade between the United States and China approximates some \$30,000,000. Exports in ten years have increased about 126 per cent.—largely made up of cotton cloth, kerosene, wheat flour, chemicals, dyes, and commodities generally that would be hard to sell in any market not under the conditions of "equal trade," and almost certainly impossible to dispose of in any market controlled by Russia or France—a feature of the question deserving special attention.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset by reversing the east bearings given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting:

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.			
Sunrise.	Bearing.	Bearing.	
November 4.....	E. 21° S.....	E. by S. 7/8 S.	
November 6.....	E. 22° S.....	E. S. E.	
November 9.....	E. 23° S.....	E. S. E.	
November 12.....	E. 24° S.....	S. E. by E. 7/8 E.	

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.			
Sunrise.	Bearing.	Bearing.	
November 4.....	E. 21° S.....	E. by S. 7/8 S.	
November 6.....	E. 22° S.....	E. S. E.	
November 9.....	E. 24° S.....	S. E. by E. 7/8 E.	
November 12.....	E. 25° S.....	S. E. by E. 3/4 E.	

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.			
Sunrise.	Bearing.	Bearing.	
November 4.....	E. 22° S.....	E. S. E.	
November 6.....	E. 24° S.....	S. E. by E. 7/8 E.	
November 9.....	E. 25° S.....	S. E. by E. 3/4 E.	
November 12.....	E. 26° S.....	S. E. by E. 5/8 E.	

LAKE SUPERIOR, LAT. 48° N.			
Sunrise.	Bearing.	Bearing.	
November 4.....	E. 23° S.....	E. S. E.	
November 6.....	E. 24° S.....	S. E. by E. 7/8 E.	
November 9.....	E. 25° S.....	S. E. by E. 3/4 E.	
November 12.....	E. 27° S.....	S. E. by E. 5/8 E.	

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied, will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

THE fatal accident which occurred on the trial trip of the torpedo boat Davis was caused by the loss of water in the front boiler. Chief Engineer Kutz, United States inspector of machinery at the Wolf & Zwicker Iron Works, Portland, Ore., made a thorough examination of the boilers. He found that the tubes in the forward end of the boiler became dry and overheated and nine of them blew out of the steam drums. The after boiler appears to be uninjured.

METRIC SYSTEM OF WEIGHTS AND MEASURES.

As considerable pressure is now being brought to bear looking towards the general adoption of metric weights and measures, we herewith print the table of same, as should the system be put in force it would apply to marine as well as stationary or shore interests.

METRIC WEIGHTS:

Milligram ($\frac{1}{1000}$ gram) equals 0.0154 grain.
Centigram ($\frac{1}{100}$ gram) equals 0.1543 grain.
Decigram ($\frac{1}{10}$ gram) equals 1.5432 grains.
Gram equals 15.432 grains.
Decagram (10 grams) equals 0.3527 ounce.
Hectogram (100 grams) equals 3.5274 ounces.
Kilogram (1,000 grams) equals 2.2046 pounds.
Myriagram (10,000 grams) equals 22.046 pounds.
Quintal (100,000 grams) equals 220.46 pounds.
Millier or tonneau—ton (1,000,000 grams) equals 2,204.6 pounds.

METRIC DRY MEASURES:

Milliliter ($\frac{1}{1000}$ liter) equals 0.061 cubic inch.
Centiliter ($\frac{1}{100}$ liter) equals 0.6102 cubic inch.
Deciliter ($\frac{1}{10}$ liter) equals 6.1022 cubic inches.
Liter equals 0.908 quart.
Decaliter (10 liters) equals 9.08 quarts.
Hectoliter (100 liters) equals 2.838 bushels.
Kiloliter (1,000 liters) equals 1.308 cubic yards.

METRIC LIQUID MEASURES:

Milliliter ($\frac{1}{1000}$ liter) equals 0.0388 fluid ounce.
Centiliter ($\frac{1}{100}$ liter) equals 0.338 fluid ounce.
Deciliter ($\frac{1}{10}$ liter) equals 0.845 gill.
Liter equals 1.0567 quarts.
Decaliter (10 liters) equals 2.6418 gallons.
Hectoliter (100 liters) equals 26.418 gallons.
Kiloliter (1,000 liters) equals 264.18 gallons.

METRIC MEASURES OF LENGTH:

Millimeter ($\frac{1}{1000}$ meter) equals 0.0394 inch.
Centimeter ($\frac{1}{100}$ meter) equals 0.3937 inch.
Decimeter ($\frac{1}{10}$ meter) equals 3.937 inches.
Meter equals 39.37 inches.
Decameter (10 meters) equals 393.7 inches.
Hectometer (100 meters) equals 328 feet 1 inch.
Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).
Myriameter (10,000 meters) equals 6.2137 miles.

METRIC SURFACE MEASURES:

Centare (1 square meter) equals 1.550 square inches.
Are (100 square meters) equals 119.6 square yards.
Hectare (10,000 square meters) equals 2.471 acres.

TOWING MACHINES.

It appears that the English are busy in devising schemes for towing their battleships and other naval vessels. An article in Engineering, London, has this to say on the subject: "Messrs. Barclay, Curley & Co., limited, Whiteinch, have launched a steel-paddle tug, built to the order of the British Admiralty, and intended (like Dromedary, also constructed by the same builders for her majesty's government) for the towing of battleships and general service. With this in view she is furnished with towing gear of the strongest description. The vessel is fitted with commodious cabin, sleeping accommodation, etc., and has numerous watertight compartments. The dimensions are 144 x 27; 3 x 15.8, with a gross tonnage of 405. The vessel was named the Diligent. The machinery consists of two sets of compound oscillating paddle engines, arranged with disconnecting gear, so that each wheel has a complete pair of engines attached to it, for easy manœuvring in her majesty's dockyard. Being intended to act as a fire vessel, she is fitted with two large double-cylinder pumping engines, capable of discharging large quantities of water; also with fresh water distilling machinery to enable her to go on foreign service. The high-pressure cylinders are 31-inch, and the low-pressure cylinders 55-inch in diameter, all having a stroke of 5 ft. Steam is supplied by two large single ended boilers, and the whole of the main and auxiliary machinery is fitted up in the admiralty style."

The United States government appears to be somewhat ahead of the British service in the convenient methods for towing large ships. When the Navy Department purchased the steam colliers Saturn and Lebanon, the tugs Robt. W. Wilmot, William H. Brown, and Gypsum King, the authorities found that these vessels were equipped with the Shaw & Spiegle patent automatic steam towing machines, furnished by the American Ship Windlass Co., Providence R. I. After trying these machines the Navy Department officials ordered a large number of the devices.

Its distinctive feature is that by means of its driving and cushioning steam cylinders there is provided an elastic steam cushion, without which the hawser would be continually straining and frequently breaking. A manila hawser, although it is more elastic than the steel hawser, it is very bulky to handle or to stow on a barge and it also becomes very expensive on account of its ordinary wear and tear. A steel wire hawser will last apparently for an almost indefinite time without stranding or even straining, as appear from practical use.

The resistance of the tow barge is borne entirely by the steam pressure in the cylinders. The wire hawser is wound

on a drum that is driven by a pinion gear on the crank shaft of the engine, which meshes with the gear on the drum shaft. This machine has a regulating, reducing steam valve, in which the opening is increased or diminished, according as the strain on the hawser increases or diminishes. The action of the machine is as follows: In a seaway, as the vessel pays off, thus increasing the strain on hawser, the drum begins to revolve and to pay out the hawser. This action opens the regulating valve and increases the steam pressure in the cylinders until the pressure is sufficient to equal the strain. Then if the strain decreases on the hawser, the pressure in the cylinders will revolve the drum and wind the hawser in. In this way the machine is prevented from paying out the whole of the hawser, and only enough is paid out to relieve the extra and momentary strain on the hawser and thus prevents its injury or its breaking.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo	1,635,000	1,713,000	1,375,000	128,000	1,036,000
Chicago	1,845,000	11,718,000	940,000	186,000	243,000
Detroit	121,000	26,000	7,000	18,000	37,000
Duluth and Superior	2,256,000	1,100,000	110,000	28,000	612,000
Milwaukee	16,000	.....	.....	2,000	37,000
Montreal	107,000	37,000	380,000	23,000	13,000
Oswego	16,000	33,000	.....	.....	75,000
Toledo	278,000	161,000	98,000	19,000	.....
Toronto	22,000	.....	4,000	.....	19,000
On Canal	91,000	378,000	138,000	20,000	426,000
Grand Total	15,476,000	24,574,000	6,373,000	1,128,000	3,267,000
Corresponding Date, 1897	26,974,000	45,958,000	15,364,000	3,444,000	3,817,000
Increase	628,000	.....	209,000	.....	63,000
Decrease .....	.....	59,000	.....	211,000	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

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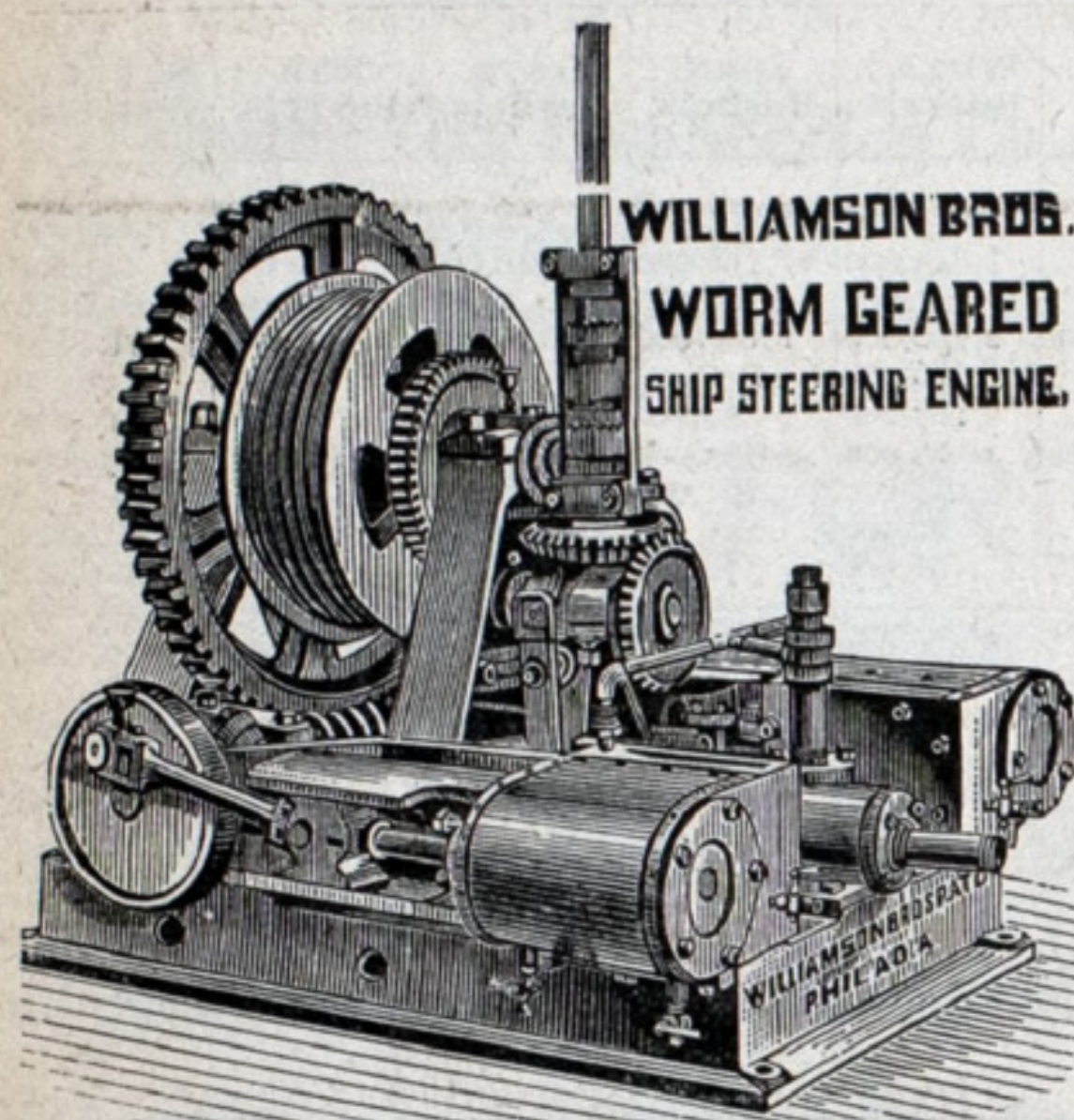
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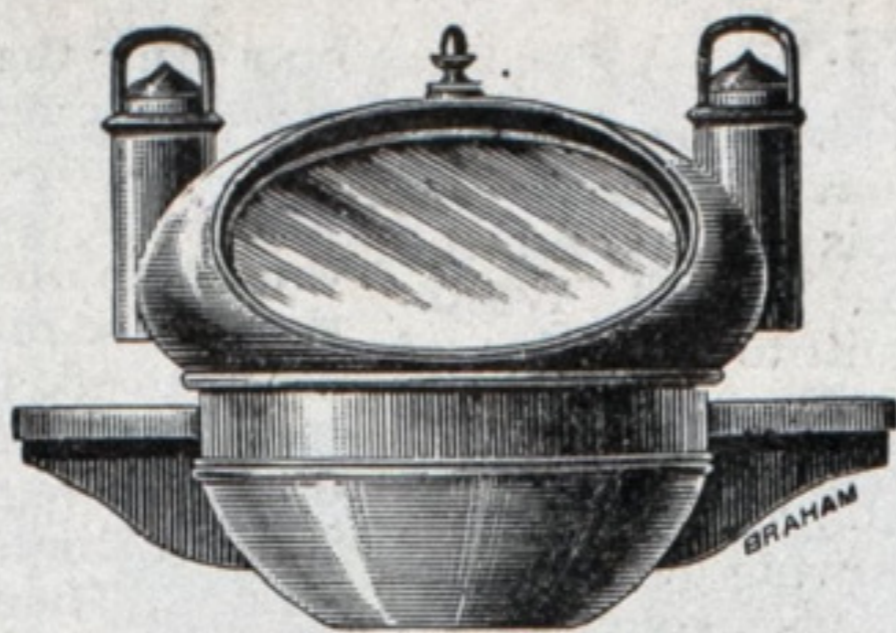
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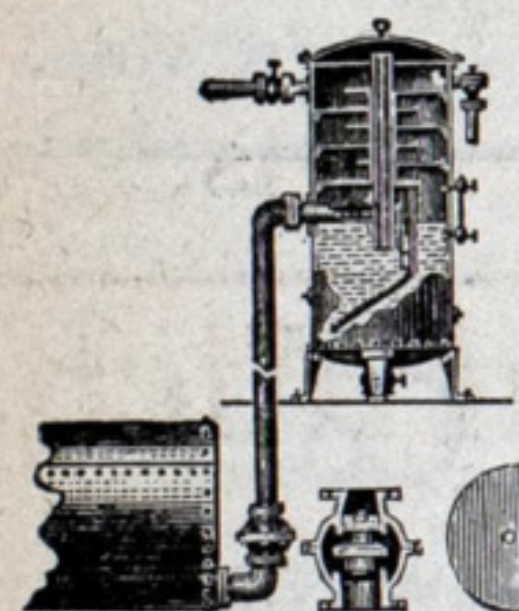
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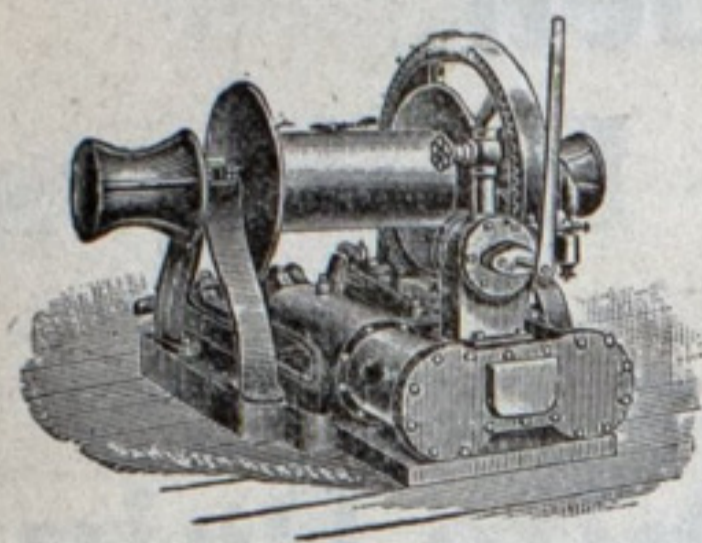
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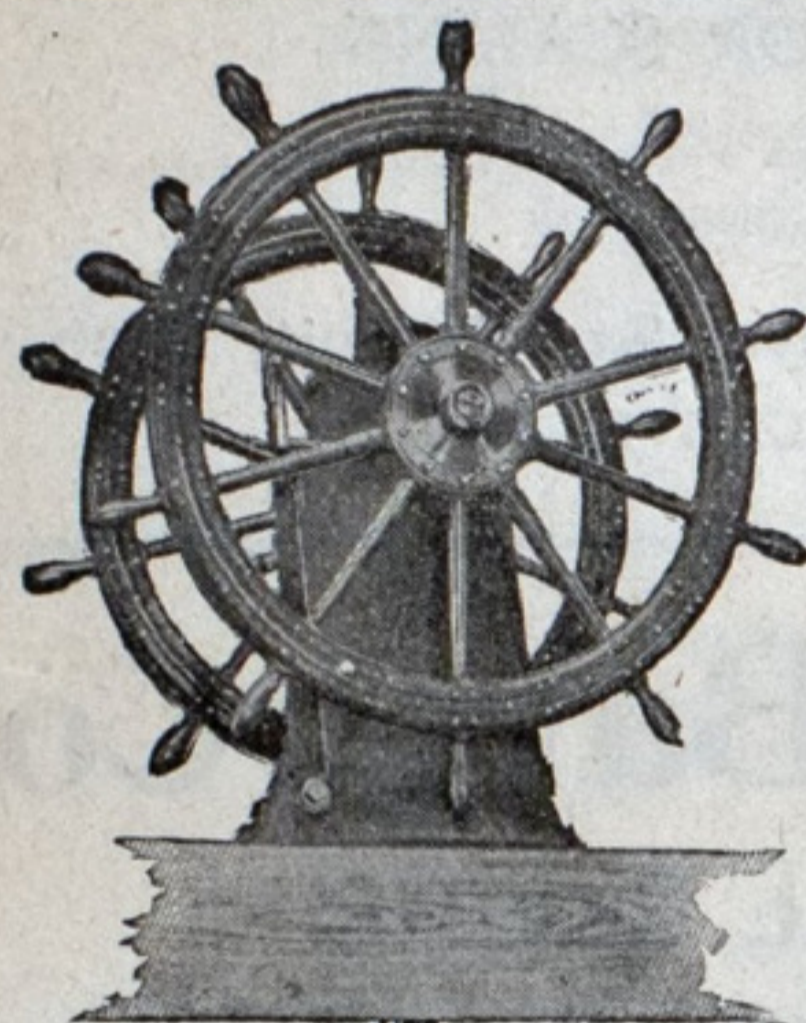
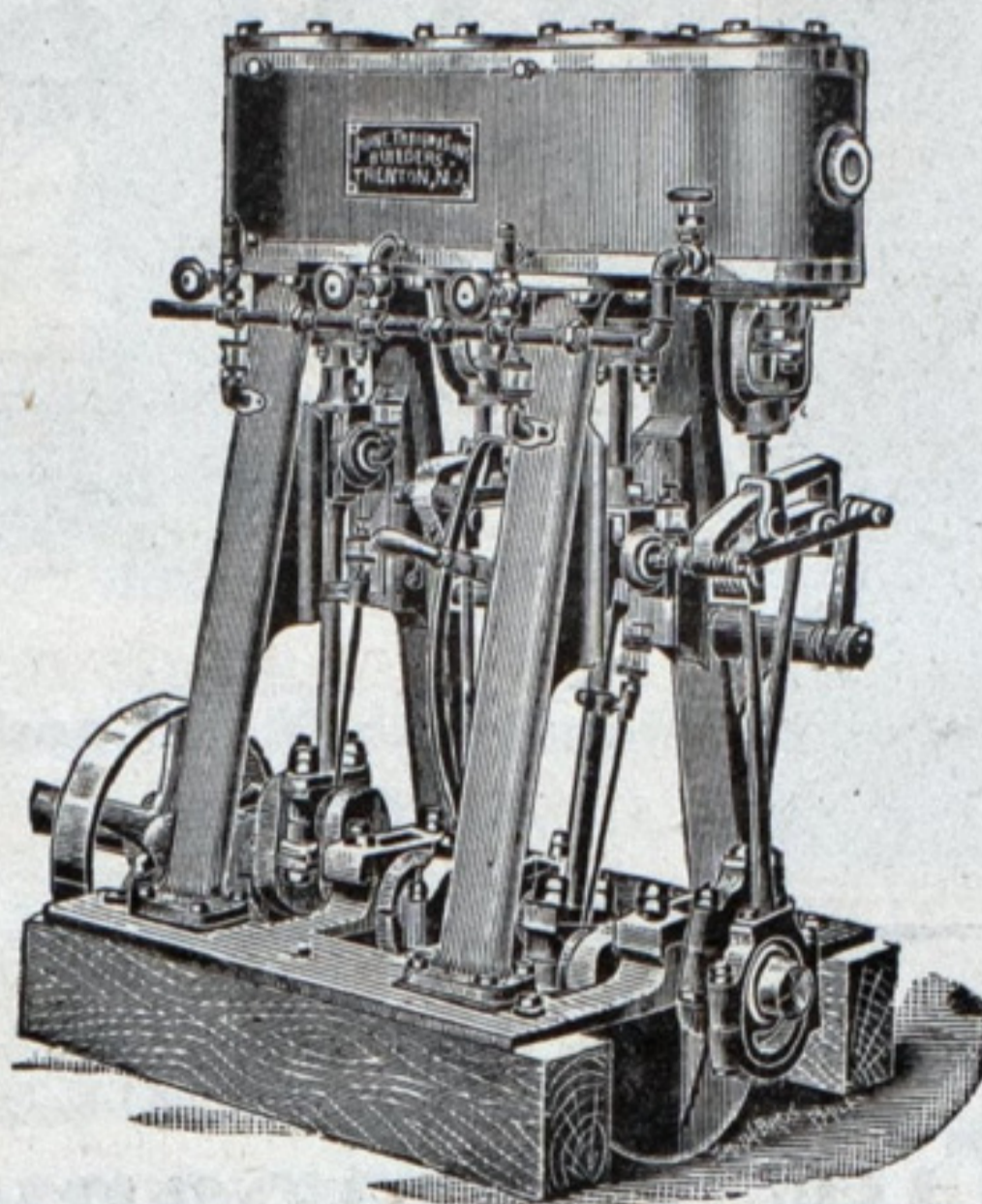
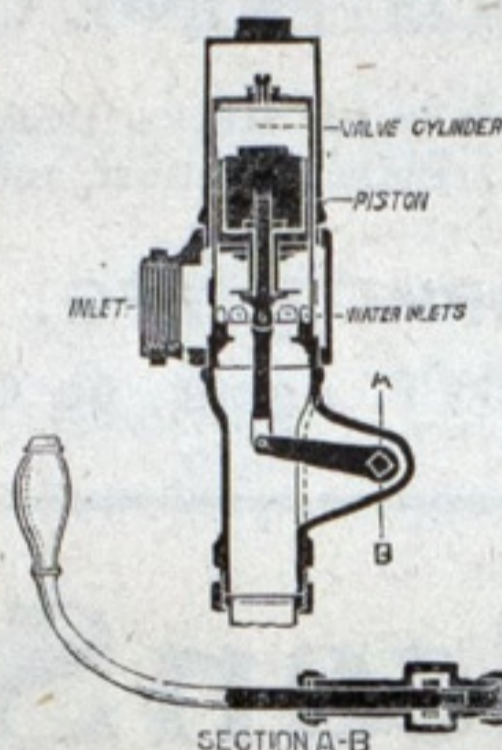
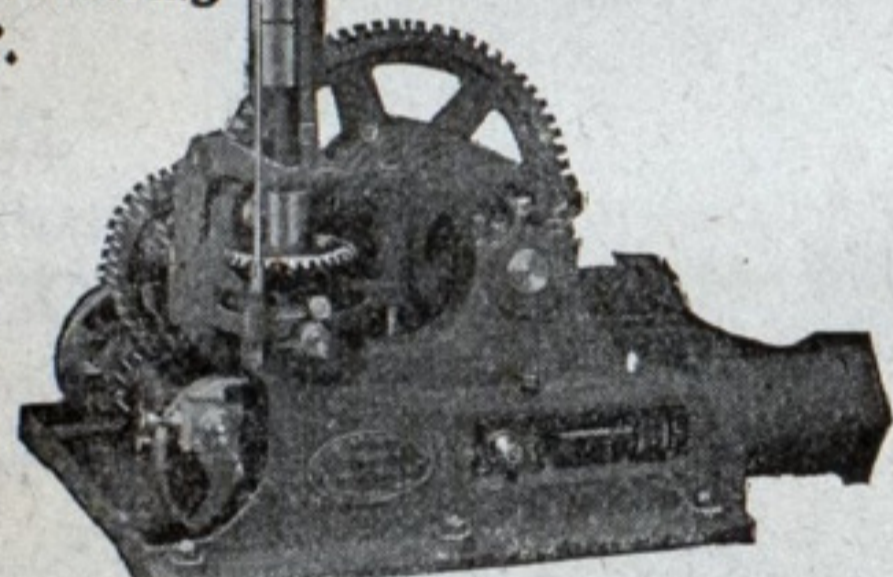
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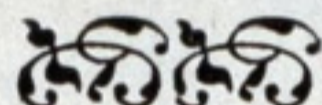
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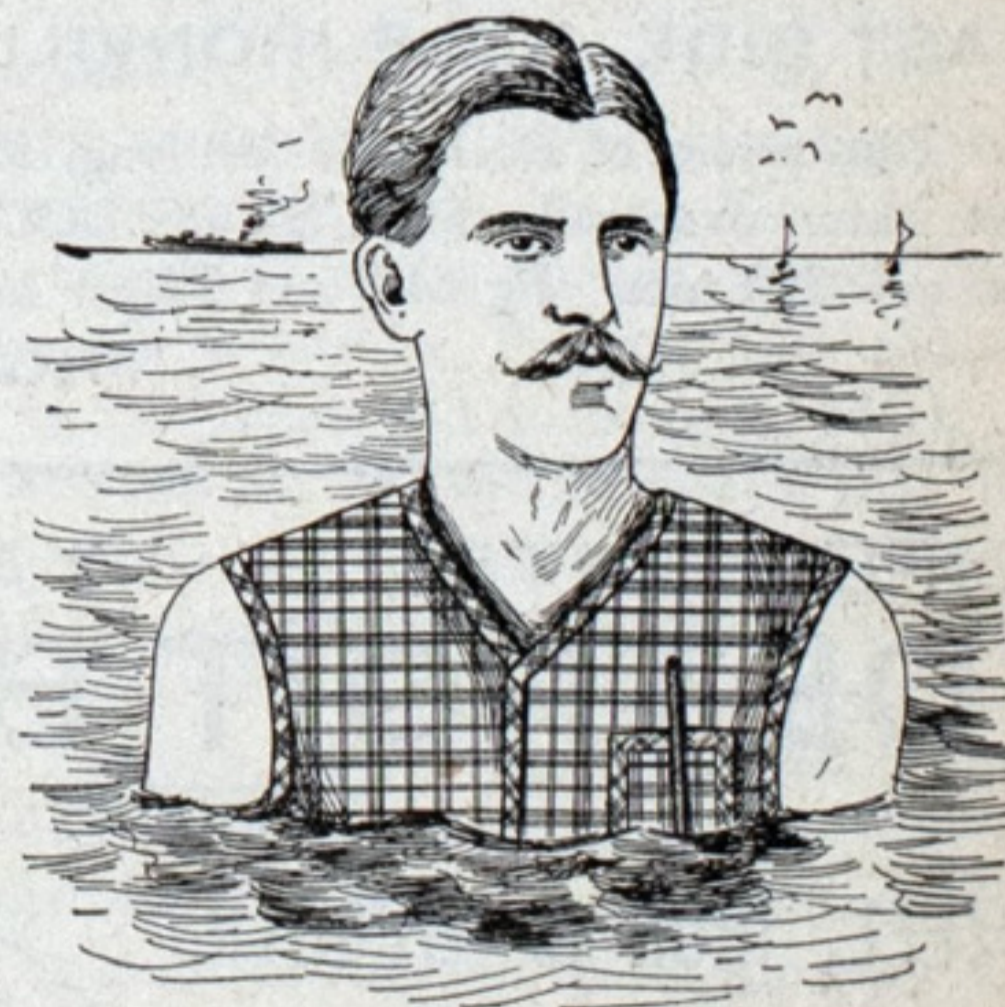
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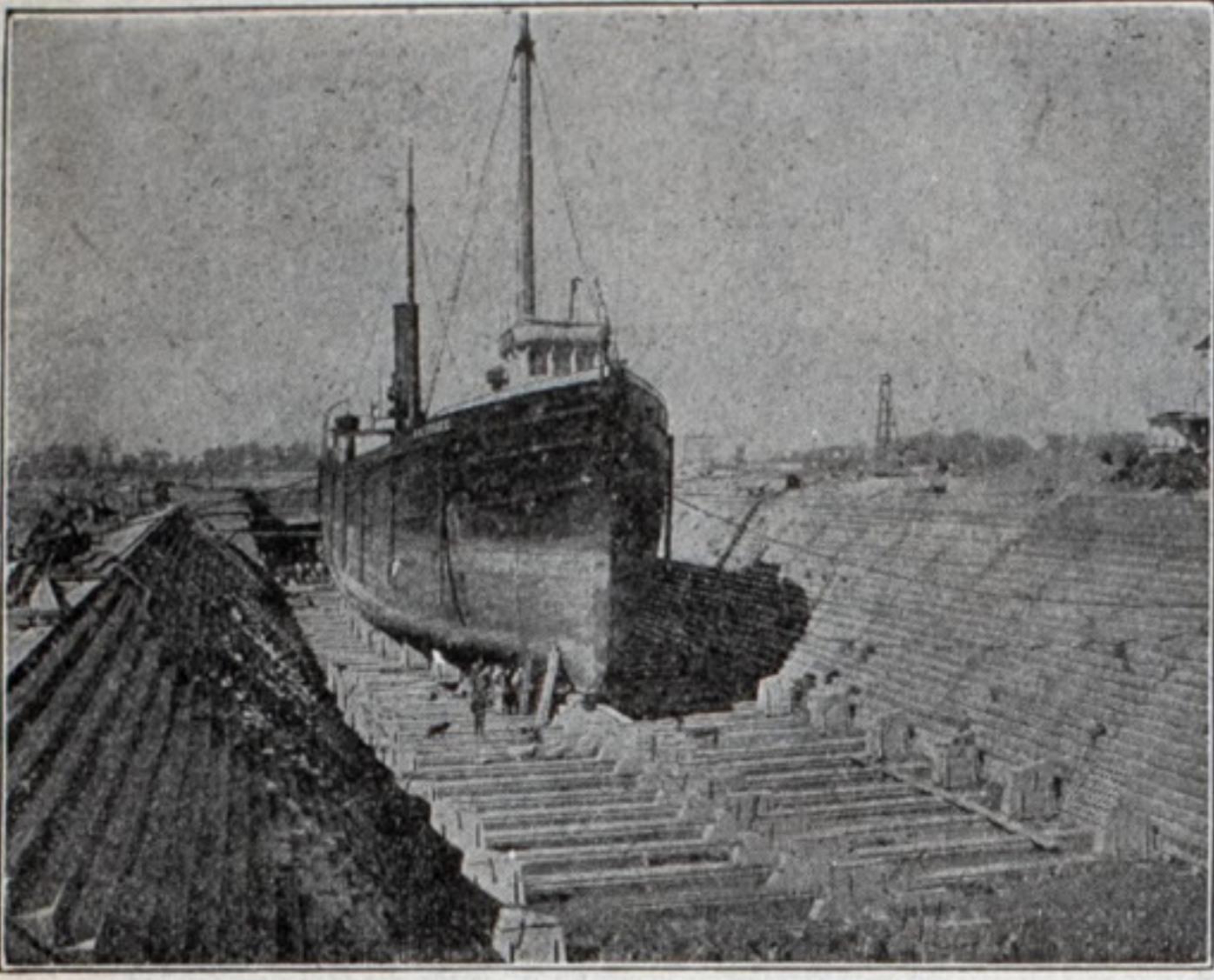
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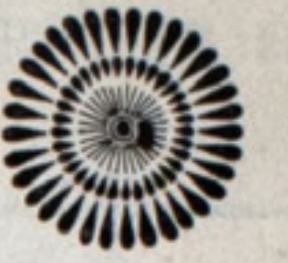
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EAST SIDE, NEAR IRONVILLE, - - - TOLEDO, O.

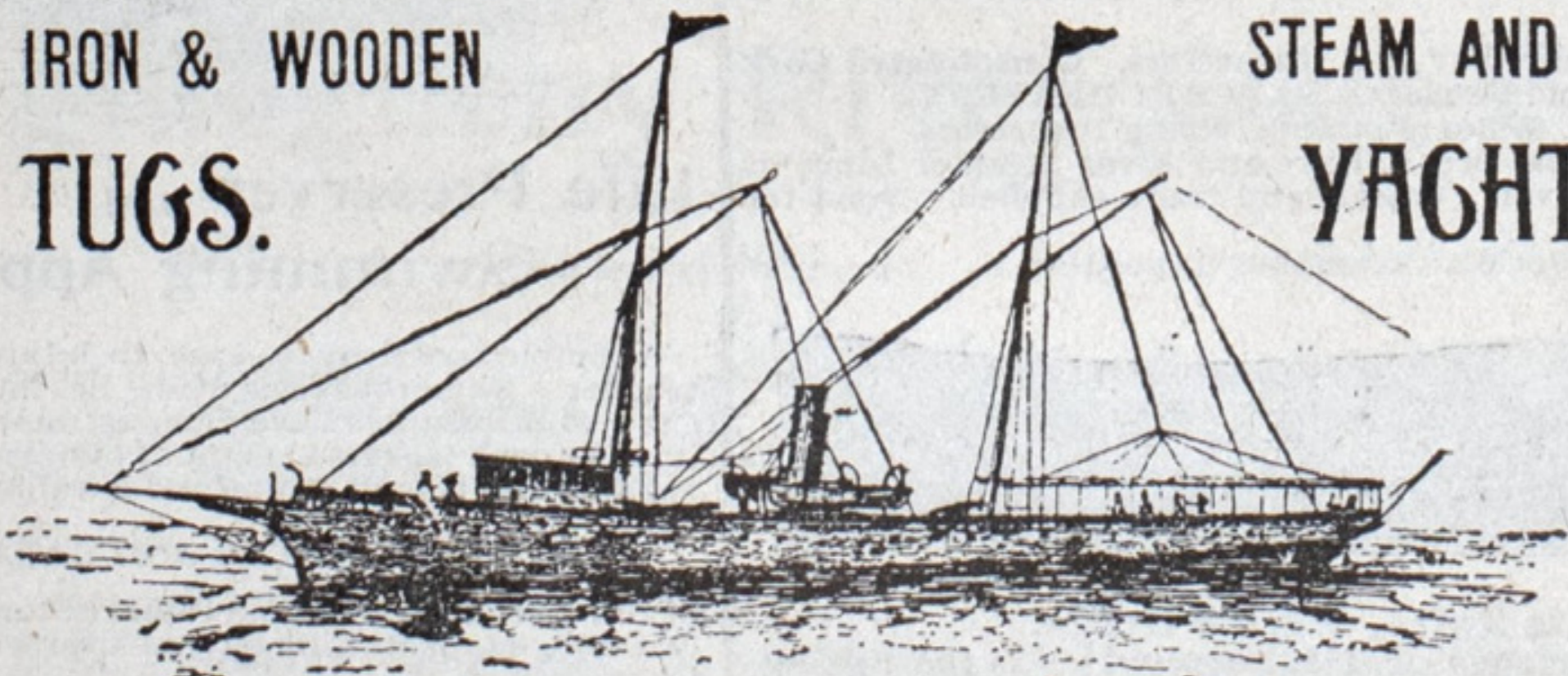
Dimensions of Dock, 236 feet long, 55 feet wide at top and 37 feet wide at gate. Nine feet water over sill. RATES OF DOCKING, Ten Cents per registered gross ton for vessels over 200 tons. Jig Mill and Planer in connection with Dock.

'PHONE NO. 157.

LIFE BOATS. YAWLS. LIFE RAFTS.
DETROIT BOAT WORKS,
DETROIT, MICH.

STEEL, IRON & WOODEN
TUGS.

STEAM AND SAIL
YACHTS.



All kinds of Pleasure Boats, Fishing & Hunting Boats, Shells, Barges, Gigs & Canoes

Paint Your
Vessel with

Superior Graphite Paint

NO BLISTERING, CRACKING OR SCALING.

Made especially for Stacks, Decks, Sides, Hulls, and Water Compartments.
Strictly Anti-Rust, and most durable and economical.

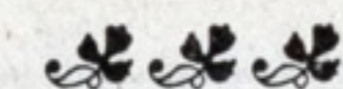
DETROIT GRAPHITE MFG. CO., 542 River St., Detroit, Mich.
C. H. HOYT, Agent, 60 Gladstone St., CLEVELAND, O.

American Steel Barge Co.

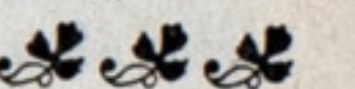
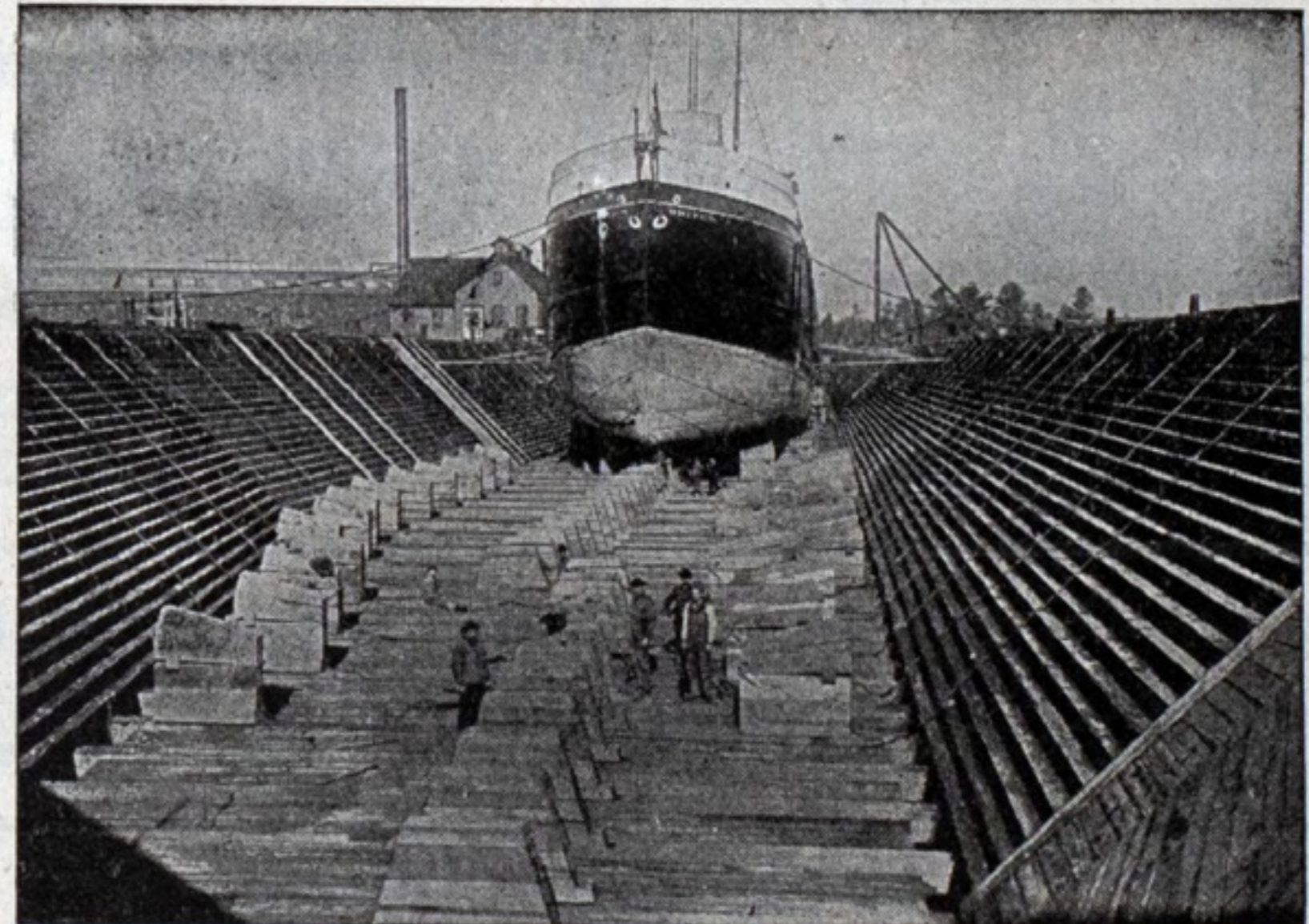
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Of all Classes built on shortest possible notice at our yards at
WEST SUPERIOR, WIS., and also at EVERETT, WASH.

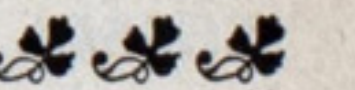
PHOTOGRAPH OF 300-FOOT BOAT IN DOCK.



Plates and
Material
always on
hand to
repair all
kinds of
Metal
Ships in
Shortest
Time.



Best
Quality of
Oak in
Stock
for
Repairing
Wooden
Vessels
of all
Classes.



SIZE OF DOCK

Length, Extreme.....	587 feet.	Entrance, Top.....	55 feet 9 in.
Breadth, Top.....	90 " 4 in.	Entrance, Bottom.....	50 "
Breadth, Bottom.....	52 "	Depth over Sills.....	18 "

LARGEST DRY-DOCK ON THE LAKES.

Prices for Repairs and Docking
same as at Lower Lake Ports.

SUPERIOR, WIS.

A Number of Propeller Wheels in Stock at Dry-Dock.

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Have a Wrecking Outfit. We have purchased the
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